FREIGHT TRAFFIC ISSUE

Chicago & Eastern Illinois tries a **top-management** approach to piggyback. p. 71

McCARTNEY LIBRARY
GENEVA COLLEGE

May 25, 1964

RAILWAY AGE WEEKLY

RD64 1116
MC CARTNEY LIBRARY
GENEVA COLLEGE
BEAVER FALLS PA

PIGGYBACK

The Trailer Train Story

p. 44

EXTRA

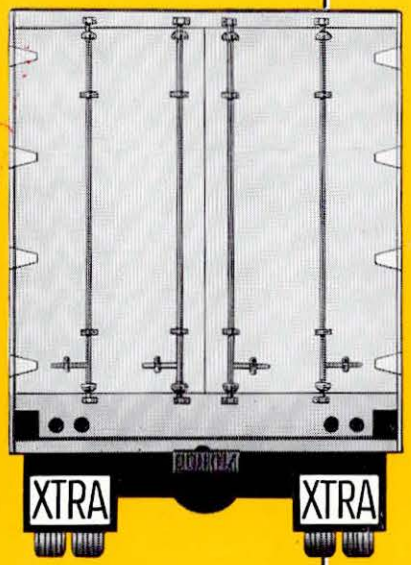
TRADE MARK

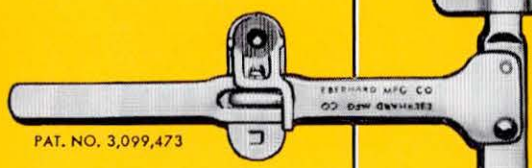
150 CAUSEWAY STREET • BOSTON, MASS.

SPECIFIES

EBERHARD 5675-X

FOR THEIR PIGGYBACK TRAILER AND CONTAINER FLEET





PAT. NO. 3,099,473

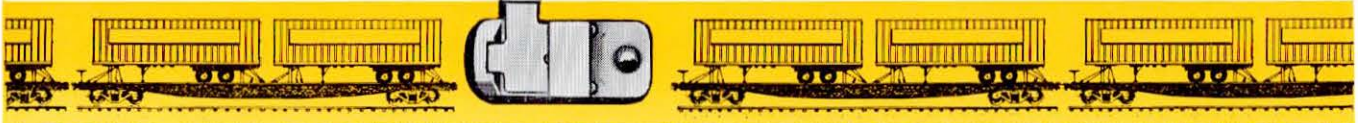
HERE'S WHY.....

Rugged Anti-Rack Cams & Keepers
Forged Steel Cam Integral with oversize Cam Shaft
Extra large heavy duty self-anchoring bearings
Swivel type-positive acting handle keeper
Frost breaking trouble free operation
Eberhard quality
We invite your inquiries about 5675-X and other locks specifically designed to meet the rigors of Piggyback container operations....

EBERHARD HAS SOMETHING EXTRA FOR YOU

EBERHARD MFG. COMPANY

EVARTS AVENUE
CLEVELAND, OHIO, 44104
DIVISION THE EASTERN COMPANY



LOCKS AND HARDWARE FOR THE TRANSPORTATION INDUSTRY

• **The Chicago and Northwestern Railroad Company** uses Double-Cover POLYCLUTCH Lining in new center-discharge, 4,000-cubic-foot-capacity covered hopper cars constructed by Pullman-Standard Division of Pullman, Inc.

One coat does the work of two with new Double-Cover POLYCLUTCH® Lining!

A single coat of this remarkable lining for covered hopper cars gives equivalent dry film thickness of two-coat systems.

Pittsburgh's POLYCLUTCH gives you:

• **Lower costs** for both material and labor by eliminating a second coat.

• **Less overspray loss,** reducing gallonage per car.

• **Longer-lasting coating,** because Double-Cover POLYCLUTCH is tough, flexible; protects against abrasion, impact and successive cleanings.

• **Quick, easy application,** with either airless or conventional cold spraying equipment.

• **Fast drying;** no waiting for drying between coats. Cars are put back into service faster.

• **Cleaner cars,** because you don't enter them again to apply a second coat.

• **Faster unloading,** because ladings slip and slide easily; won't stick to POLYCLUTCH's hard, smooth, non-porous surface.

• **No contamination losses,** as this non-toxic lining is tasteless, odorless, and has no effect on foodstuffs. Approved by the U. S. Food & Drug Administration.

• **For additional facts** about Double-Cover POLYCLUTCH, and how it does a better job at less cost, write Pittsburgh Plate Glass Co., Industrial Finishes Division, 1 Gateway Center, Pittsburgh 22, Pa.

PPG® PITTSBURGH® PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

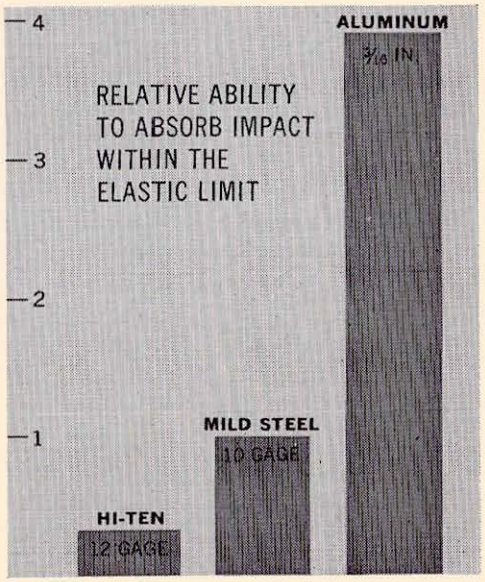
IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

Why you should specify aluminum for your piggyback trailers: They may cost a little more but are worth a lot more... to your shipping customers... to your maintenance men... to your accountants

At trade-in time, an aluminum trailer earns $500 to $1,000 more than its same-size, heavy metal counterpart.

Why? Because aluminum resists corrosion—stays structurally strong and good-looking for years, painted or bare. Humping shocks are taken in stride—aluminum has three times the impact resistance of steel. Its low modulus of elasticity enables aluminum to "give" more than steel before it takes permanent deformation. Hefty aluminum construction permits 50 per cent thicker sections at one-half the weight. Its low tare weight permits higher over-the-highway payloads within legal limits. And leakproof, one-piece aluminum roofs keep cargo dry and shippers satisfied, too.

Progressive railroaders are using Alcoa® Aluminum for their piggybacks. And they're not alone. The Department of Commerce reports three times as many aluminum van trailers were sold in 1963 as the other kind. Ask your trailer rep about the long-term advantages of aluminum—the metal your accountants will keep on their books for years. Or, call your local Alcoa sales office or write direct to Aluminum Company of America, 1739-E Alcoa Building, Pittsburgh, Pa. 15219.



ALCOA

Editorial Staff

• **Editorial and Executive Offices**
ew York, N. Y. 10007, 30 Church St.

MES G. LYNE, Editor
BERT G. LEWIS, Publisher
THER S. MILLER, Executive Editor

naging Editor .....Fred C. Miles
ffic-Transportation .....G. C. Hudson
ws Editor .....Edward F. Donlon
ansit Editor .....Joseph Asher
echanical
C. L. Combes F. N. Houser, Jr.
gnaling & Communications
Robert W. McKnight
torial Director .....George Dusenbury
t Director .....Joel Petrower
itorial Assistant .....June Meyer
irector of Research .....J. W. Milliken
brarian .....Edith C. Stone

Chicago, Ill. 60602, 22 W. Madison St.
OHN D. MITROS GUS WELTY
estern Editor Senior Editor

echanical .....Norman E. Gillespie
ngineering .....M. H. Dick
R. E. Dove E. W. Hodgkins, Jr.
urchases & Stores .....William V. Tuite
ditorial Assistant .....Wanda Brown

Washington, D. C. 20004,
National Press Bldg.
ashington Editor .....Walter J. Taft

London, W. 1, England
63/65 Piccadilly
ternational Editors
Geoffrey Wilson Paul Goldsack

•

JOE W. KIZZIA, Consulting Editor

Railway Age, established in 1856, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.

Published weekly, except the last week of December, by the Simmons-Boardman Publishing Corporation at 440 Boston Post Road, Orange, Conn.

Railroad employees' subscription rate: U. S. possessions, Canada and Mexico, $6 one year, $8 two years, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year. In other countries, $15 a year. Single copies 60¢ except special issues. Address all subscriptions, changes of address and correspondence concerning them to: Subscription Dept., Railway Age, Emmett St., Bristol, Conn.
Change of address should reach us three weeks in advance of next issue date. Send old address with new, enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Circulation Dept.; Robert H. Lash, Director of Circulation, John Rogers, Circulation Manager, 30 Church St., New York, N. Y. 10007. POSTMASTER—SEND FORM 3579 TO EMMETT ST., BRISTOL, CONN.

Printed at the Wilson H. Lee Co., Orange, Conn. Second-class postage paid at Orange, Conn. and at additional mailing offices.

May 25, 1964 • Vol. 156, No. 20

PIGGYBACK

THE TRAILER TRAIN STORY ..... p. 44

- **Why TTX cars make new high mileages** ..... p. 48
- **Piggyback: A tough laboratory** ..... p. 52
- **Contract shops do repairs for TTX** ..... p. 55

Shippers assess ICC piggyback rules ..... p. 43

C&EI tries a top-management approach ..... p. 71

The Action Page—TOFC versus box cars p.108

BRT fights crew arbitration

The Trainmen boycotted a crew-consist arbitration board on the MP—and took the board's award to court. **p.11**

Reading's new route to decision-making

One facet of the carrier's "management engineering" approach: mechanized reporting of train performance. **p.67**

Car thawer speeds coal-dock dumping

Western Maryland believes its new thawing facilities at Port Covington may be the most efficient in the East. **p.82**

Departments

Calendar of Meetings 90
Freight Carloadings 103
Industrial Traffic 106
Letters from Readers 90
Monday Morning Report 8
New Equipment 103
New Products Report 97
People in the News.....106
Railroading After Hours 78
Railway Market 103
Short and Significant..... 7
Supply Trade 106
The Action Page 108
Traffic Poll 43
Watching Washington..... 12
You Ought to Know.....104

MINER®

DRAFT GEARS

The remarkable endurance and sturdiness qualities of Miner draft gears have been substantiated in every way by field performances under all types of operating conditions. You can count on Miner's bold thinking to keep pace with your needs and to provide products that meet, or exceed, the highest performance standards.

W. H. MINER, INC., CHICAGO

Office of Foreign Operations: 1212 Pennsylvania Bldg., 425 Thirteenth St. N.W., Washington 4, D.C., U.S.A.

SHORT AND SIGNIFICANT

Merger job pact signed by PRR, NYC, unions

Unions are still officially opposing the Pennsylvania-New York Central merger—but the signing of a job-protection agreement last week indicated that the opposition would be of the token variety. The agreement becomes effective if and when the merger is approved. A joint carrier-union announcement said the pact "basically provides reduction of employment through natural attrition of retirements, death, and resignations, but will further limit work force reductions to five per cent annually of an established base of the total number of qualified employees in each craft. . . ."

SP boosts '64 spending to record $178 million

Southern Pacific, which early this year announced an all-time-high $144-million capital spending program, last week broke its own record by tacking on another $34 million. Major items on SP's $178-million shopping list: 3,600 new freight and passenger-train cars ($71.3 million); 191 locomotives ($46.7 million); highway equipment ($10.5 million).

NKP: Big plans for '65

First indication of spending plans for 1965 has come from the Nickel Plate—and it's on the rosy side. NKP, which plans to spend more than $15 million on freight equipment this year, will probably spend more than $20 million for new equipment in '65, President M. B. Phipps told shareholders at Cleveland last week. Barring strikes, NKP expects '64 profits to be the highest in five years.

Employment: Seasonal rise

Class I railroads employed 667,994 persons in mid-April—up 1.14% from March (but 0.91% below the year-ago figure). The increase was seasonal; largely responsible was a 4.85% increase in the ranks of maintenance-of-way-and-structures employees.

North American's car fleet expanded

Out of North American Car's Texarkana, Ark., plant and into service for A. E. Staley Manufacturing Co. last week came two new tank cars—a stainless-steel, two-compartment, 16,347-gallon-capacity car for hauling corn syrup, and an 8,200-gallon-capacity tank equipped for in-transit heating. A second stainless steel tanker of smaller capacity, but designed for the same service, will be introduced later this year.

Transit bill moves along

The House Rules Committee voted 8-4 last week to send the mass-transit bill (H.R. 3881) to the floor for final consideration. House approval is anticipated.

Shopcraft unions vote to strike

Six organizations representing more than 150,000 shop employees are threatening a strike to back their demands for wage increases. No date for a walkout has been set. Presumably, the dispute will go to an emergency board. Meanwhile, hearings have been resumed in the shopcrafts' job stabilization dispute. An emergency board in this case is scheduled to report by June 17.

FEC gets new president

Florida East Coast's 35-year-old vice president and chief operating officer, W. L. Thornton, who got the trains running again after the road was struck over a year ago, is its new president. He succeeds William B. Thompson, Jr. Edward Ball continues as FEC chairman and chief executive officer.

MONDAY MORNING REPORT

TOFC: 1954-64 was great—how about 1964-74?

Piggyback's first decade has been a real rouser—first decade, that is, dated from the ICC's green-light decision in the 1954 New Haven case. Now, as of 1964, the Commission has delivered itself of another major decision—setting up, in Ex Parte 230, the broad set of TOFC rules which are scheduled to become effective in about six weeks, on July 6. And the big piggyback question is, simply, what will the next decade hold?

Railroads find the answers

Ten years' experience with TOFC has given railroads answers to a sizeable number of questions that fogged the piggyback scene in the early days. Trailer-on-flat-car operations, for example, apparently have not forged their gains at the expense of box-car traffic. Some roads can even report piggyback acting as a spur to carload business—on the premise that shippers becoming happily re-acquainted with rail service through piggyback can often also be approached for a re-entry into carload operations.

Piggyback and the truckers—what's ahead?

Railroads have found, too, indications that the opposition to TOFC from the motor-carrier industry may be diminishing. The relatively rapid recent development of Plan V operations points to this. So does the high level of interest in TOFC terminal operations shown by a growing number of local cartage companies. At this point, motor carriers should be finding piggyback more attractive than ever before, unless all the signs are wrong. Reason: Costs. Railroads, through a continuous battle for greater efficiency and through the work-rules arbitration, stand to make significant gains in the war on costs (though the gains could be partially offset in settlements of labor disputes now pending). On the other hand, motor carriers have found the cost squeeze tightening—and the wage-benefit package handed to the Teamsters earlier this year did nothing to brighten up the economics of the industry.

TOFC sales efforts geared for growth

A number of observers seem convinced that railroads today are on the verge of a new piggyback growth cycle—that the recent slackening of the growth rate was artificially induced by factors which no longer obtain (among them, concern over the Ex Parte 230 investigation and over the possibility of a strike in the work-rules case). Significantly, a number of roads seem to be adding new emphasis, new muscle, to TOFC sales efforts—some subtly, some not so subtly. Various moves being made tend to bear out the theory that the top layer of potentially available traffic may have been sliced off in piggyback's dramatic decade, 1954-64—and that, while the potential for continued growth is tremendous, conversion of potential into reality demands an even higher standard of quality in sales work.

TOFC's future: Nowhere but up

This emphasis on sales, of course, is being complemented in at least two other major areas—operations and equipment. Freight-schedule speed-ups (almost a nationwide phenomenon) and solid TOFC trains are giving sales forces powerful new talking points. At the same time, there are strong indications that further equipment improvements and innovations are in the works, for near-future unveiling. In short, developments in these three areas—sales, operations, equipment—plus the record of a decade make it pretty clear: Piggyback's going nowhere but up.

...AND FRUIT GROWERS EXPRESS

HAS 687 MORE JUST LIKE IT!

Since buying their first Model 230B Transicold Diesel refrigeration-heating unit in 1960, Fruit Growers Express Co. of Washington, D. C. — the nation's largest hauler of perishable piggyback freight — has purchased 687 additional Transicolds — and now over 50% of the F.G.E. fleet are Transicold Diesels. And what's the biggest reason? Transicold Dependability!

TRANSICOLD & DEPENDABILITY— BYWORDS IN PIGGYBACKING!

Transicold Dependability is centered around its patented Permanent Magnet Generators — that have no wearing parts; its rugged, oversized Carrier compressors; and its economical, wet-sleeved Perkins diesels.

Here are just a few of the railroads that have begun using Transicold Diesels since Fruit Growers Express first tried Transicold Dependability in 1960: Chicago-Great Western, Denver and Rio Grande-Western, Kansas City Southern, Milwaukee Motor Transportation, Northern Pacific Transport, Pacific Fruit Express, Baltimore and Ohio, and the Western Pacific Railroad.

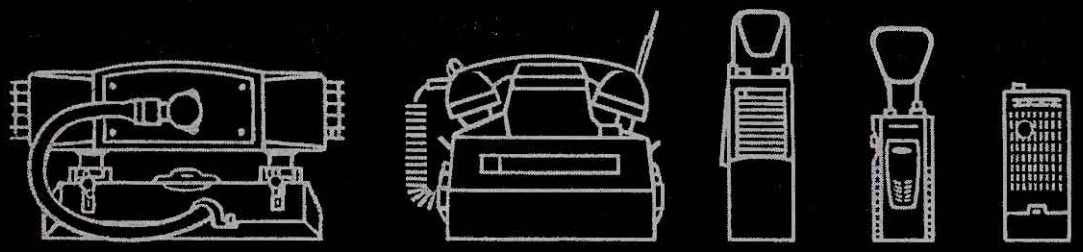
And remember: Transicold Dependability is now available either underslung or "on the nose"— either 7½ ton or 10 ton capacity! Write today for more information.

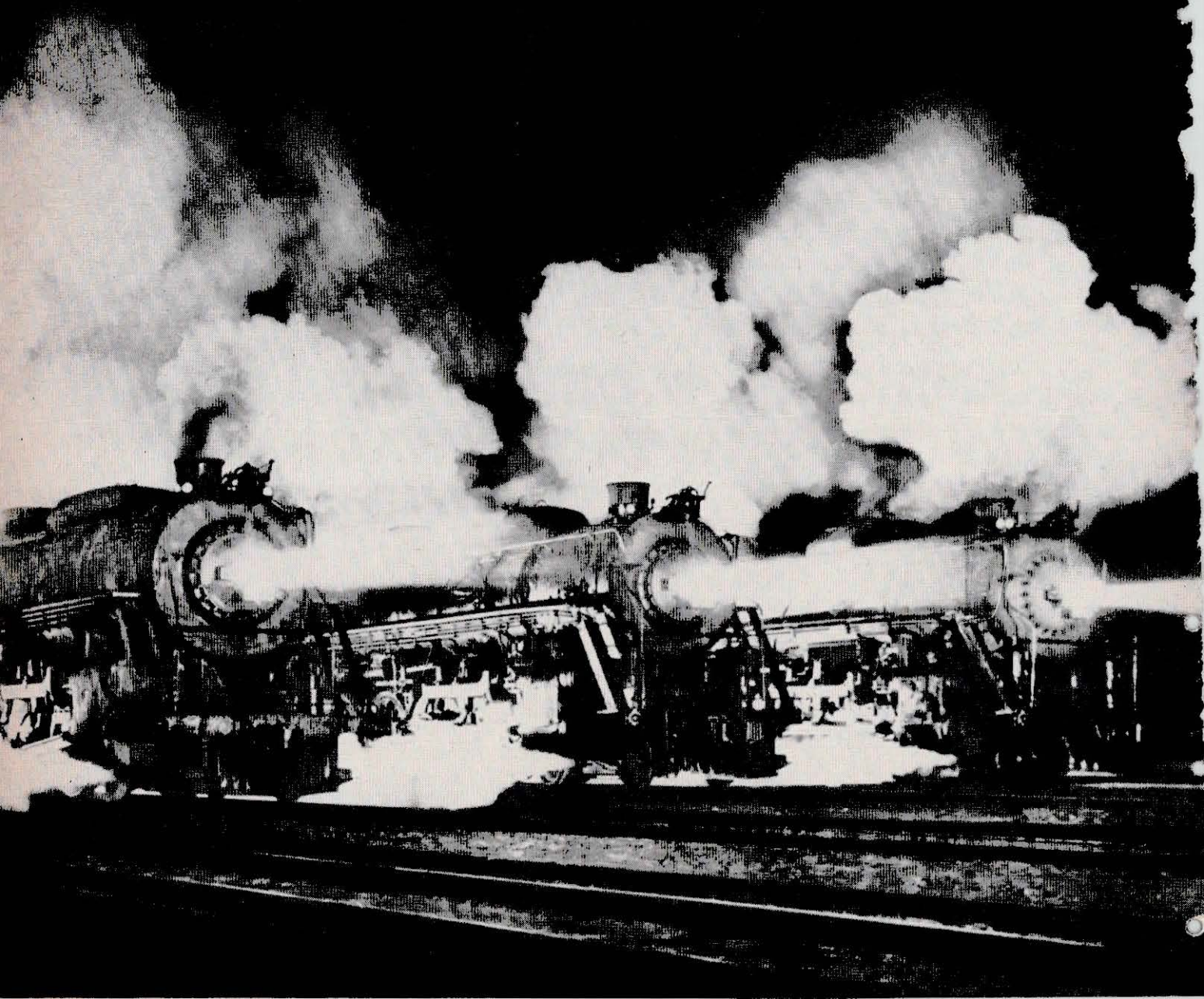
TRANSICOLD Corporation, 1100 South Taylor Avenue, Montebello, Calif.

GIVING THE GIANTS A VOICE

. . . the continuing job of Motorola railroad radio specialists for over 15 years! Today, tough and talkative Motorola radio units—hundreds of which are 10 years old or more—serve giant Diesels on-the-move . . . boost the efficiency of M/W crews . . . provide full voice contact for the variety of jobs handled by men-on-foot. Over 150 railroads now depend on Motorola experience to help keep their operations profitably on-the-move. For full "application" facts on Motorola's unequalled variety of railroad "talking tools", call your Motorola specialist or write for Bulletin TIC 1638. Motorola Communications & Electronics Inc., 4501 Augusta Blvd., Chicago 51, Illinois. A Subsidiary of Motorola Inc.

MOTOROLA
RAILROAD RADIO





Crew arbitration: BRT wages court fight

Individual-property arbitration of crew-consist issues has now begun, but the Trainmen are balking. BRT refused to appoint a member to a MoPac arbitration board, which then proceeded to make an award approving most of the carrier's proposals. Court action followed.

Crew-consist arbitration moved front and center on the labor stage last week —with the Brotherhood of Railroad Trainmen in court trying to stymie application of an award handed down in a Missouri Pacific case.

At the same time, the National Mediation Board indicated it had received about 25 requests from various roads for appointment of a neutral to sit with crew-consist boards. In some cases, carriers were also calling for the NMB to name a union representative (as was provided for in Arbitration Board 282's award as a means of handling cases where one side or the other refuses to make an appointment).

• **Court delays.** Missouri Pacific, meanwhile, was hung up in U.S. District Court, at least temporarily. The BRT had succeeded earlier in having MP placed under a temporary restraining order, and after hearings were begun May 20, the case was continued to May 22. The outlook was that the dispute might run into the week of May 25 before any decision was made.

(Union sources last week said the MP case was believed to be the first to go to individual-property arbitration. But they also cited one instance of agreement-by-negotiation on crew consist with another major railroad.)

• **No union participation.** In the arbitration proceedings, the Trainmen first declined to name a representative to the board, then called for an indefinite delay and, finally, refused to participate in the proceedings. The result was an award, signed by the railroad representative and neutral member Dudley E. Whiting, which approves the bulk of the carrier's crew-consist proposals.

(In all, four cases were considered—involving MoPac, Texas & Pacific and two smaller MoPac subsidiaries. Awards in the subsidiary cases were similar in nature to the one handed down on MP's proposals.)

Among the major points covered in the Missouri Pacific award:

— All main-line local freight trains may be operated with a minimum of two brakemen.

— All classes of road service on branch lines may be operated with a minimum of one brakeman.

— MP's proposal to operate certain passenger trains (14 were specified) without use of a brakeman-flagman was sustained.

— Engines operated in yard, transfer, belt-line or miscellaneous yard service may be operated with a minimum of one helper, except that no helper will be required on assignments at four light-volume yards.

• **Changing work patterns.** Throughout, the award bears down heavily on technological change, changes in traffic patterns, and the consequent changes in work patterns and work load.

On the main-line local-freight issue, for example, MP proposed operation with two brakemen. The BRT contract in force provides for a crew of one conductor and three brakemen. The award had this to say:

"It appears that when this rule was first written in 1890 there was a large amount of LCL freight handled in way-freight or peddler cars, and that it was the duty of the train crew to load and unload such freight at various stations along the line. Today, no way-freight or peddler cars are used and the work of loading and unloading them has been eliminated.

"At that time, it also appears, many small industries used rail service, whereas many of them now use truck service, which has substantially reduced the switching required by local freight crews.

"Other changes over the years are

TAFT

● **ICC PIGGYBACKING RULES** which the railroads find most objectionable are those requiring that TOFC services offered under open tariffs be made available to carriers as well as shippers. That would permit truckers and water carriers to use Plans II, III and IV, principally Plan III. That's ramp-to-ramp service with trailers furnished by shippers. Plan II is door-to-door service in railroad equipment, and Plan IV is ramp-to-ramp service with trailers and flat cars furnished by shippers. Truckers and water carriers are now restricted to use of Plans I and V. The former involves ramp-to-ramp transportation of trucker and water-carrier trailers under contractual arrangements. Plan V is service performed under joint rail-truck or rail-water rates. The rules, prescribed by the Commission in Ex Parte No. 230, are scheduled to become effective July 6 (RA, Apr. 13, p. 12).

THE RAILROAD ATTACK on the proposed extension of open-tariff services to competing carriers is in petitions seeking Commission reconsideration of the rules. The petitions, some of which also seek elimination or modification of other rules, include pleas of the AAR and of eastern, southern and western railroads.

THE AAR PETITION recognized that the railroads have a record of endorsing the open-tariff idea. That position was taken when the industry embraced all recommendations of the late President Kennedy's Transportation Message of April 5, 1962. Those recommendations included the late President's call for legislation to "assure all carriers the right to ship vehicles or containers on the carriers of other branches of the transportation industry at the same rates available to non-carrier shippers."

THE AAR ARGUES, however, that the Kennedy message furnishes no support for the Commission's open-tariff rules. The petition insists that the late President's call for legislation to implement the recommendation "strongly indicates" that the Commission now lacks authority to impose the rules. The pleas of the regional railroad groups take the position that the open-tariff rules amount to an assumption by the Commission of power, which it does not have, to require railroads to join in through routes with motor carriers.

SUPPORT for these railroad views is found in the dissenting opinion which the Commission's vice-chairman, Charles A. Webb, filed in the case. He said the late President Kennedy's "respect for the law" contrasted sharply with the Commission's approach. That, Mr. Webb complained, was a "free-wheeling interpretation" which disregarded statutory language and legislative intent.

● **THE AAR'S PRICE AND WAGE INDEX** for 1963 was 111.1, up slightly from 1962's 110.2. The rise was due to the wage index's increase from 112.9 to 114.1. The index of materials and fuel prices was down to 100.7, from 1962's 101. The indexes are based on the 1957-1959 averages as 100.

THE LATEST QUARTERLY PRICE INDEX, for this year's first quarter, was down a bit from the previous quarter—100.6 compared with 101. Lower fuel prices were responsible. The fuel index was down from 94 to 91.1. There were increases, each less than a point, in all of the other group indexes.

the installation of automatic block signals, CTC, automatic crossing signals, and radio communications with and between trains. Operating officials [of MP] consider flag protection of trains outmoded, in view of the improved systems of control and communication, and propose to change the operating rules to eliminate any requirement for flagging. When that work is eliminated, one less brakeman is necessary to accomplish the work and man all positions for work when the train is stopped.

"Through freight trains operate over most of the territory served by these locals. They have a crew consisting of a conductor and two brakemen and perform some switching, set-out and pick-up of cars. This is cogent evidence that the locals can be operated safely with the crew consist proposed by the carrier."

● **Branch-line freights.** Much the same reasoning was applied to MP's proposal to operate branch line freights with a single brakeman (who would be assigned to ride in the locomotive when the train is running over the road and there is no fireman on board).

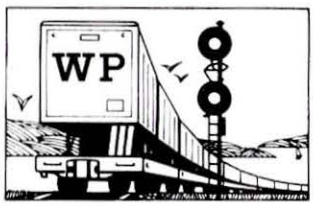
Plans to drop the brakeman-flagman position from 14 passenger trains also got an okay. Said the board: "It appears that his sole duty has been to provide flag protection when the train is stopped, and that he has not handled mail or baggage, assisted passengers, nor participated in the handling of passenger transportation . . ."

For yard service, MP proposed to operate all assignments with only one helper—with the exception of 11 assignments in the St. Louis terminal and all assignments at four other yards, which would be operated without a helper.

● **One helper.** The board upheld MP on its one-helper proposition: "It appears that cumulative [technological] changes have reduced the effort required of yardmen and enhanced the safety of yard operations. Even if we assume that firemen will be eliminated from yard engines, it is apparent that the proposal of the carrier to reduce the stipulated number of helpers used in all classes of yard service to one, is justified."

MoPac was turned down on its proposal to operate certain assignments without a helper in the St. Louis terminal. But the board did go along with the plan to operate no-helper assignments at Leavenworth, Falls City, Fort Scott and Paragould yards. In each case, the board reviewed the work load and ruled: "It is apparent that the work involved could easily be accomplished by a foreman without a helper during his regular tour." ■

Typical housewife picks winner in Taste Test!
"This is it! This asparagus tastes so field-fresh it must be the one that was shipped on one of those brand new Western Pacific Refrigerated Trailers!"
WESTERN PACIFIC RAILROAD
Typical young matron reveals the secret of her slim figure! "Eat fresh pineapples. But only if they're shipped in one of those handsome new WP Refrigerated Trailers. That's the secret!"
WESTERN PACIFIC RAILROAD
Ads like these are fun!

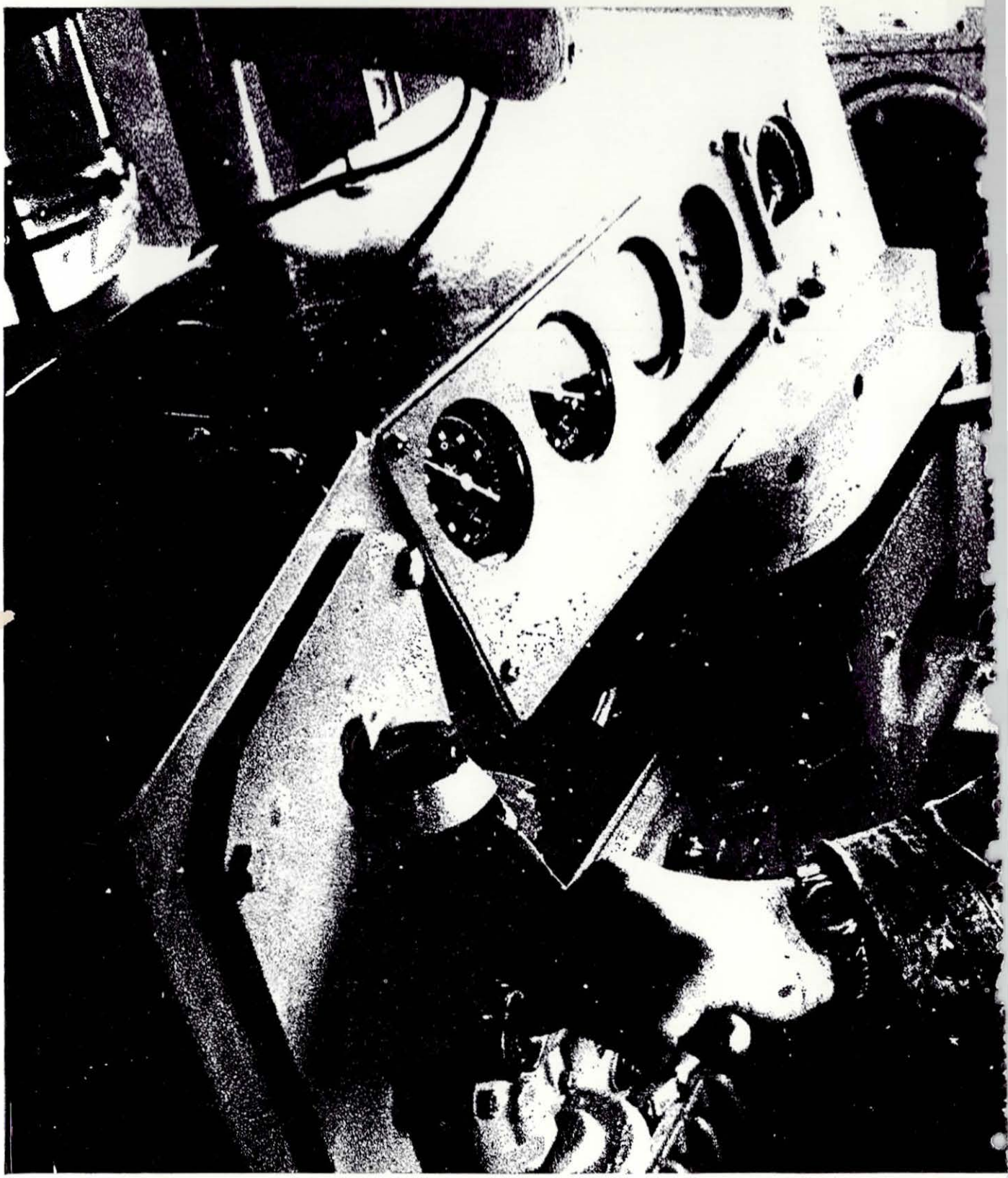


Piggybacking itself we take seriously. So do the perishable shippers who read our ads in their trade journals, as well as a host of other Western Pacific piggyback users. We invite you and your railroad to join us in producing increased revenues and profits from an ever-expanding piggyback operation.

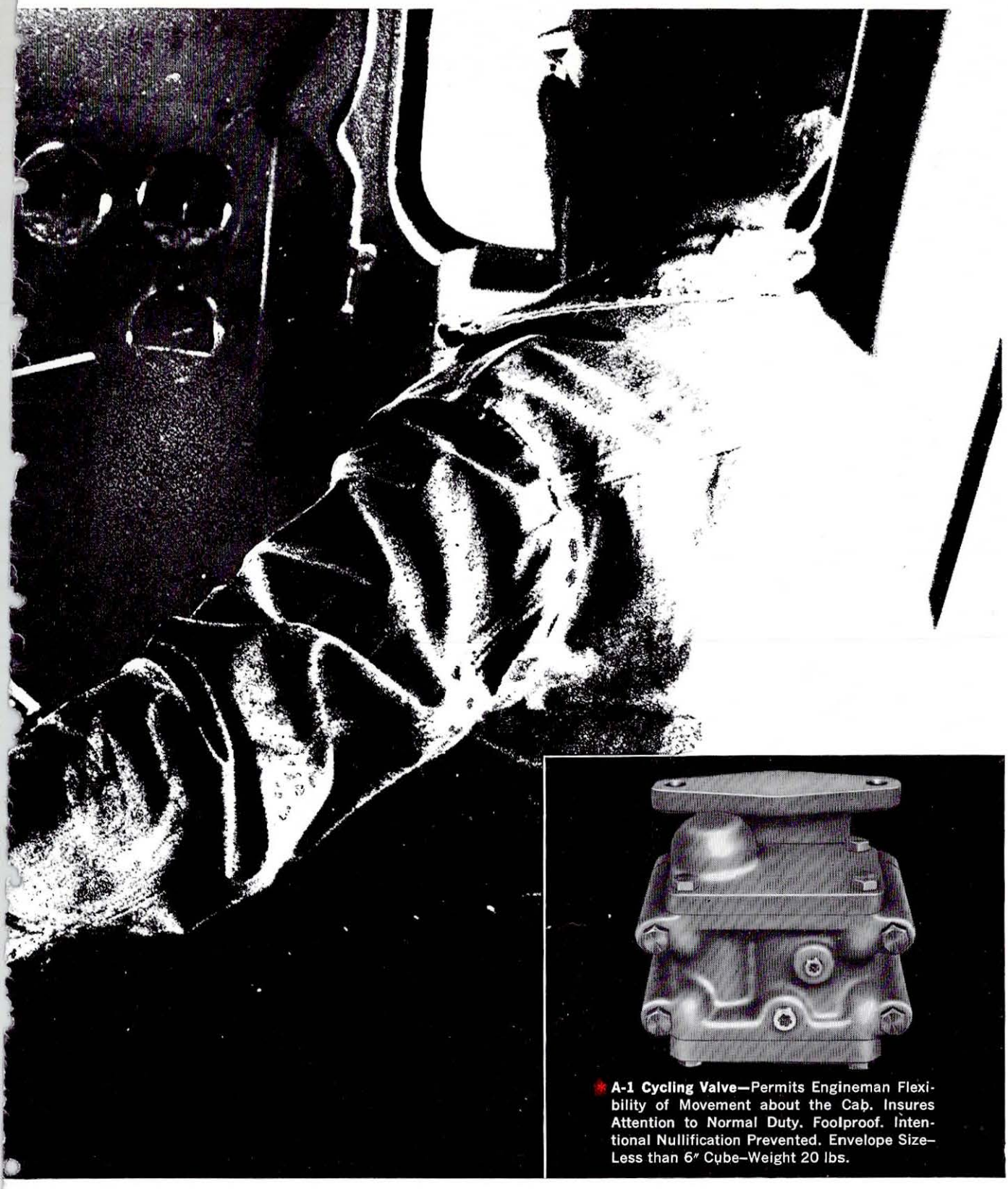
We will be happy to furnish you with complete information on rates, routes, special new equipment, etc.—call, write or wire your WP Sales Representative or C. G. Hartje, Jr., Mgr., T.O.F.C. Services. Contact us now. Won't you?

WESTERN PACIFIC

526 MISSION STREET, SAN FRANCISCO (YUkon 2-2100)



WABCO SAFETY INSURING SYSTEM GUARANTEES INFALLIBILITY OF CONTROL OF MOVING TRAINS



A-1 Cycling Valve—Permits Engineman Flexibility of Movement about the Cab. Insures Attention to Normal Duty. Foolproof. Intentional Nullification Prevented. Envelope Size–Less than 6″ Cube–Weight 20 lbs.

DEPENDABLE – Over 40 years of proven service with basic system. Continuously monitors the engineman through a foot pedal interlocked with the air brake system. Brakes are applied and power shut off should the engineman cease his normal functions.

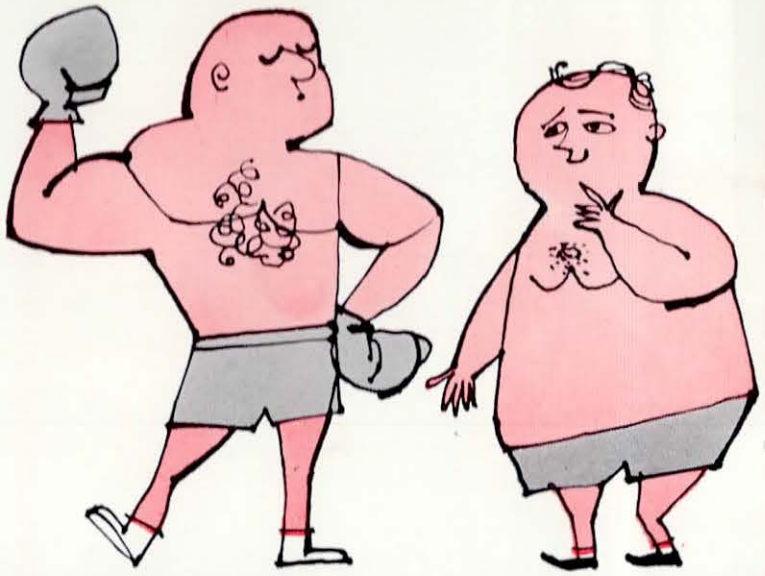
NEW FEATURE ADDED – Cycling Valve gives engineman freedom of movement. Prompts attentiveness to normal duty. Departure from normal requires acknowledgment to forestall full automatic brake application.

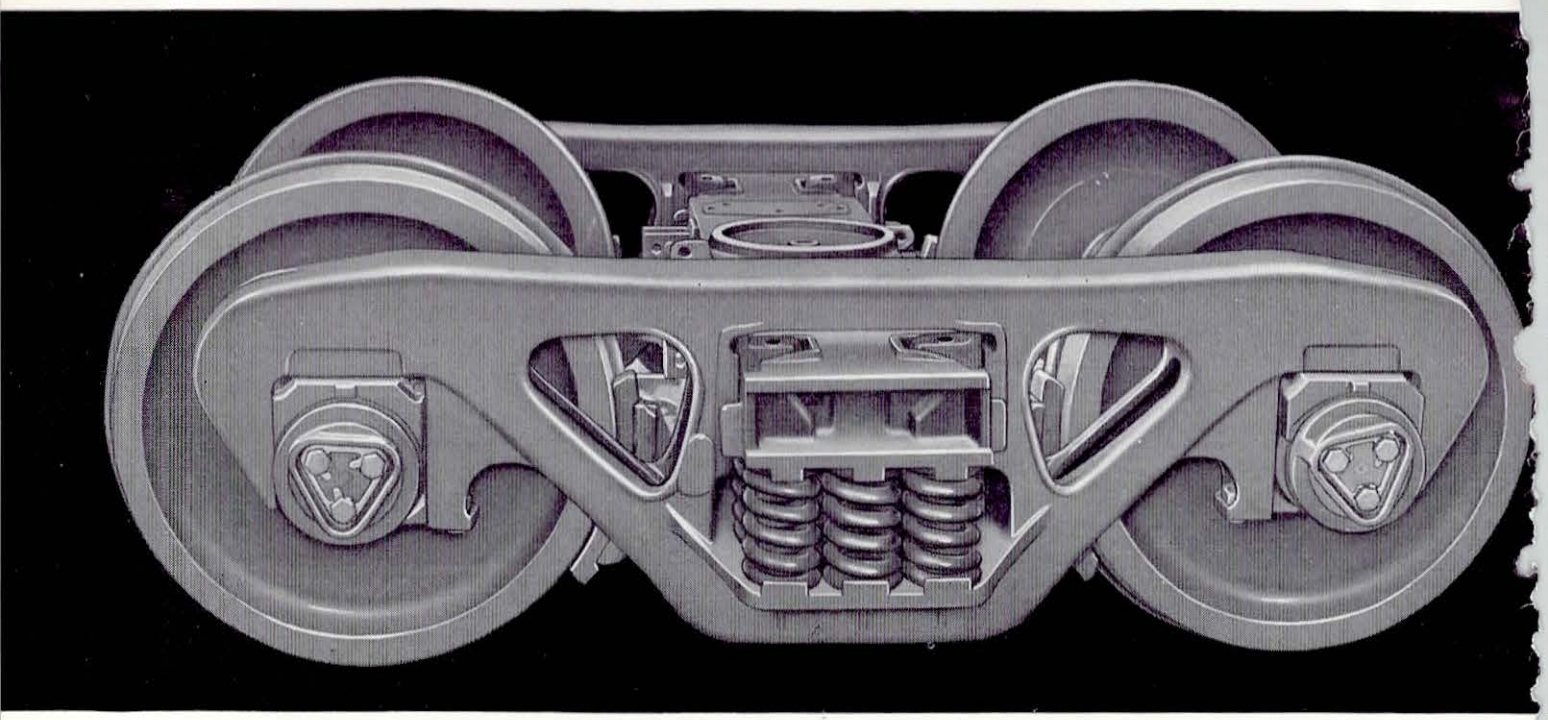
EASILY INSTALLED – Entirely pneumatic. Requires no mechanical or electrical drive. Small pipe connections. Maintained by air brake personnel.
Tamperproof – lowest cost.
Your Westinghouse Air Brake Division representative will be pleased to review this system with you.

WABCO

WESTINGHOUSE AIR BRAKE DIVISION
WILMERDING, PA. / Westinghouse Air Brake Company

THERE'S A BIG DIFFERENCE BETWEEN A HEAVYWEIGHT AND AN OVERWEIGHT





Why buy overweight freight car trucks? A.S.F. Trucks (The Champion) are lighter and stronger!

A recent survey revealed that side frames and bolsters made by ASF weigh up to 800 pounds less per car set than castings of similar designs produced by other manufacturers. Yet ASF Trucks are stronger, more dependable and have a greater life expectancy.

ASF advanced engineering permits the exchange of useless dead weight for payload. This is another reason why the railroads use more ASF Side Frames and Bolsters on their freight cars.

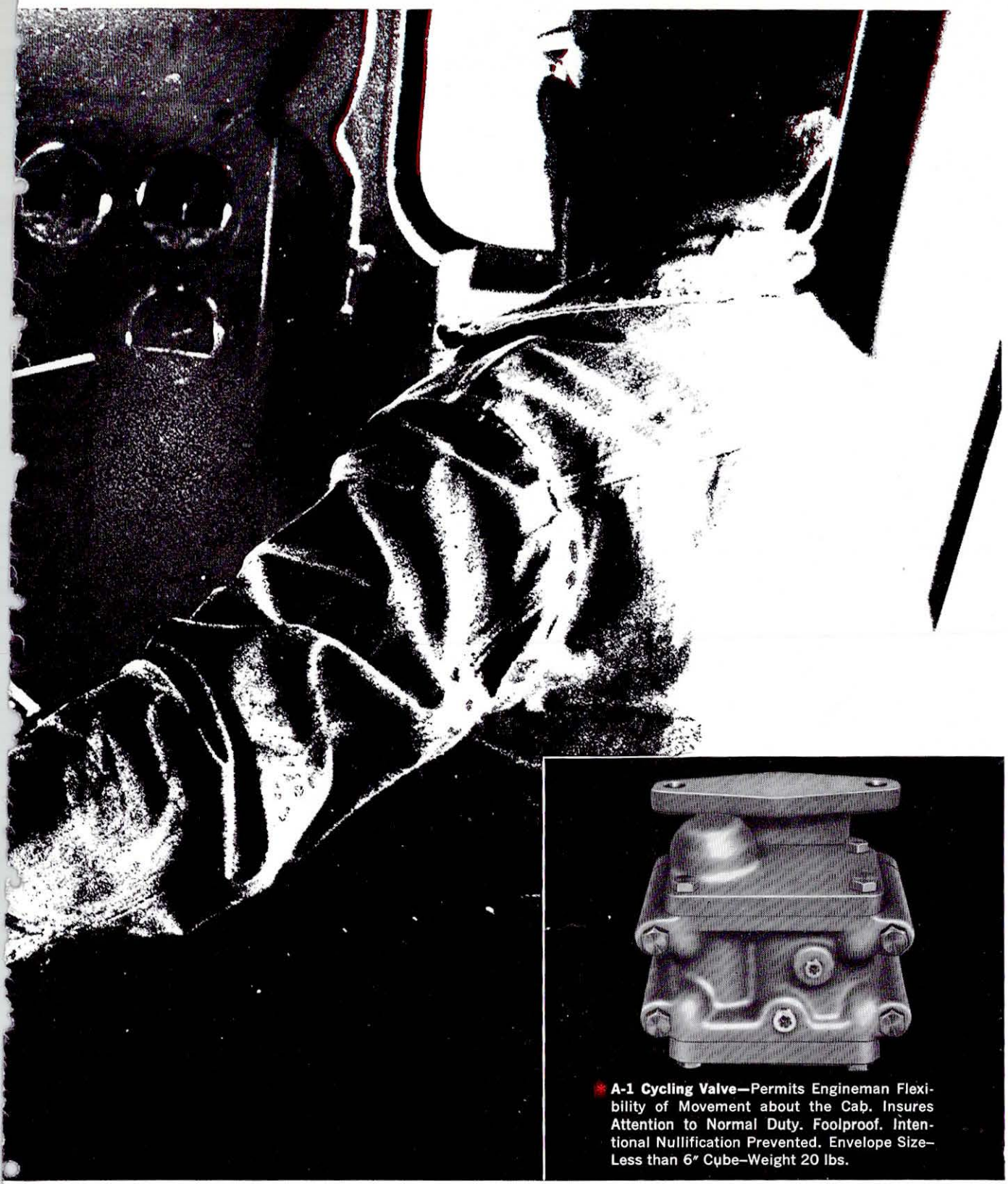
For the lightest and strongest trucks available, see your nearest American Steel Foundries representative.

Canadian Manufacturer and Licensee: International Equipment Co. Ltd., Montreal 9, Quebec
Other foreign sales: Amsted Industries International, Chicago

ASF **AMERICAN STEEL FOUNDRIES**
INCORPORATED

TRANSPORTATION EQUIPMENT DIVISION
Prudential Plaza • Chicago, Illinois 60601

ONE OF THE Amsted INDUSTRIES



A-1 Cycling Valve—Permits Engineman Flexibility of Movement about the Cab. Insures Attention to Normal Duty. Foolproof. Intentional Nullification Prevented. Envelope Size–Less than 6″ Cube–Weight 20 lbs.

DEPENDABLE – Over 40 years of proven service with basic system. Continuously monitors the engineman through a foot pedal interlocked with the air brake system. Brakes are applied and power shut off should the engineman cease his normal functions.

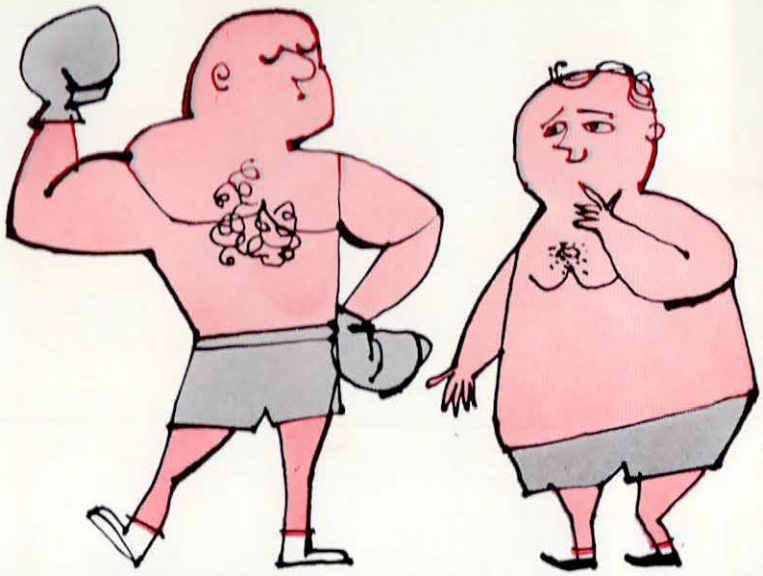
NEW FEATURE ADDED – Cycling Valve gives engineman freedom of movement. Prompts attentiveness to normal duty. Departure from normal requires acknowledgment to forestall full automatic brake application.

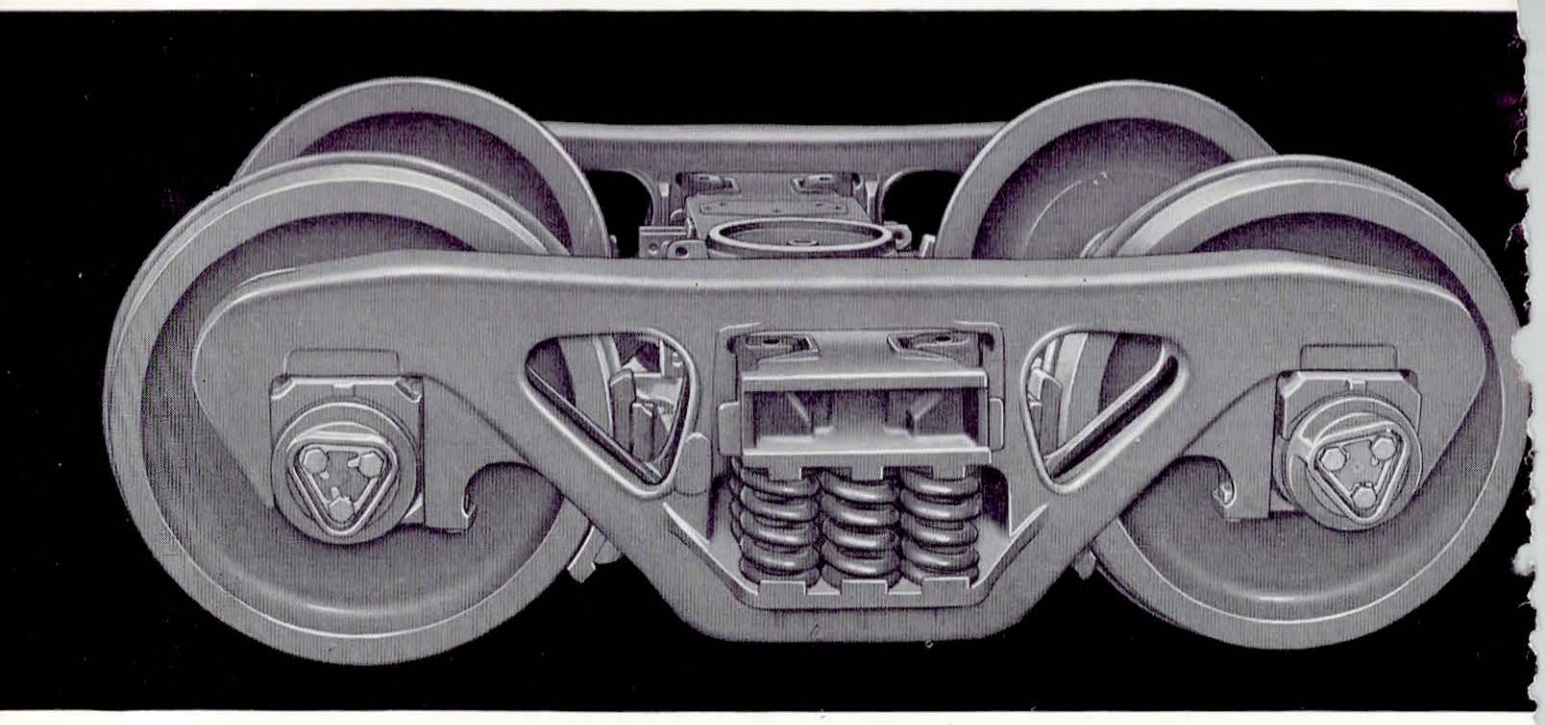
EASILY INSTALLED – Entirely pneumatic. Requires no mechanical or electrical drive. Small pipe connections. Maintained by air brake personnel.
Tamperproof – lowest cost.
Your Westinghouse Air Brake Division representative will be pleased to review this system with you.

WABCO

WESTINGHOUSE AIR BRAKE DIVISION
WILMERDING, PA. / Westinghouse Air Brake Company

THERE'S A BIG DIFFERENCE BETWEEN A HEAVYWEIGHT AND AN OVERWEIGHT





Why buy overweight freight car trucks? A.S.F. Trucks (The Champion) are lighter and stronger!

A recent survey revealed that side frames and bolsters made by ASF weigh up to 800 pounds less per car set than castings of similar designs produced by other manufacturers. Yet ASF Trucks are stronger, more dependable and have a greater life expectancy.

ASF advanced engineering permits the exchange of useless dead weight for payload. This is another reason why the railroads use more ASF Side Frames and Bolsters on their freight cars.

For the lightest and strongest trucks available, see your nearest American Steel Foundries representative.

Canadian Manufacturer and Licensee: International Equipment Co. Ltd., Montreal 9, Quebec
Other foreign sales: Amsted Industries International, Chicago

ASF **AMERICAN STEEL FOUNDRIES**
INCORPORATED

TRANSPORTATION EQUIPMENT DIVISION
Prudential Plaza • Chicago, Illinois 60601

One of the Amsted Industries

Landreth's
pre-molded Urethane foam panels provide the first revolutionary design in insulated box cars and reduce manpower and speed car building

Dateline Chicago

Landreth pre-molded Urethane foam panels offer Greater capacity, Greater payload, Greater insulation efficiency

Through years of research and development, Landreth engineers have perfected the most efficient Urethane Panel available today.

The New, Landreth Pre-Molded Urethane Foam Panels enable railroads and carbuilders to build a better car faster, with less man hours in their own shops. The new Landreth System enables the builder to provide a urethane foam car without the necessity of installing special machinery and costly facilities.

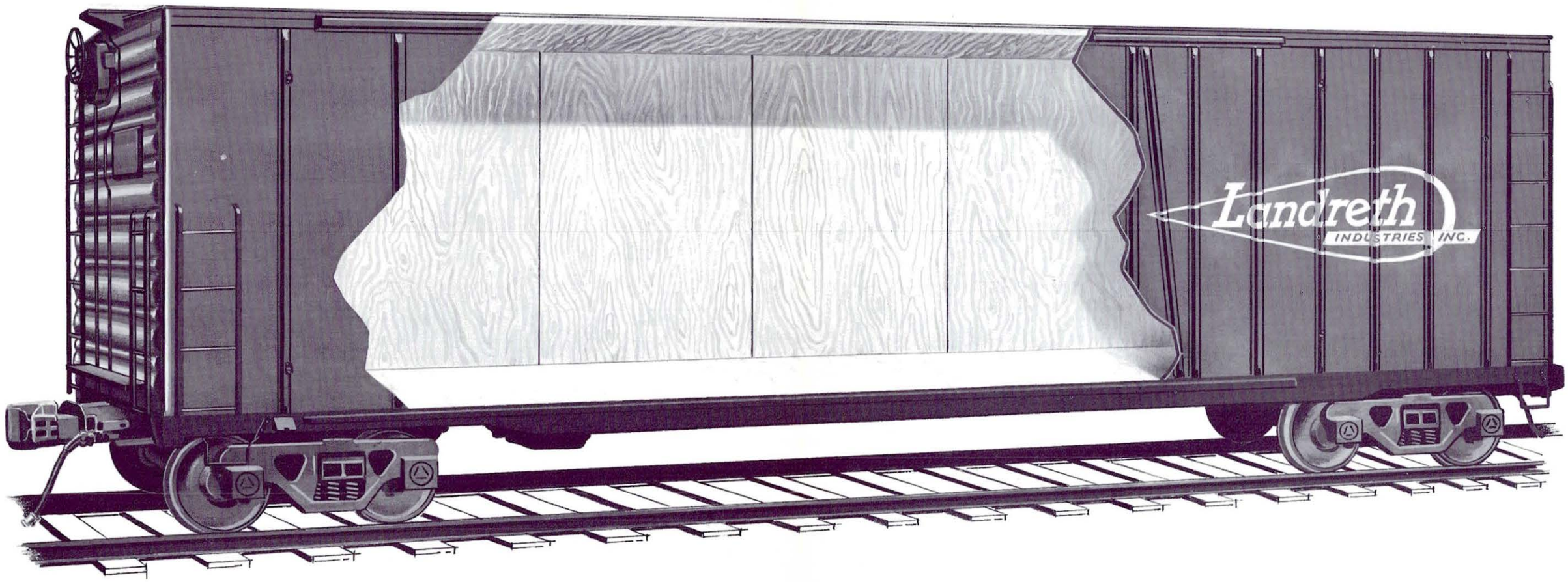
By using the Landreth System, the builder can realize a savings, and still provide the user with a more efficient insulated box car.

Landreth Pre-Molded Urethane Panels provide superior insulation while using only one-half as much material as conventional insulations. Thus, more cubic content can be obtained without increasing the size of the car.

Only 14 panels are required per car, cut to size and ready to bolt into place—6 for the sides and ends, 2 for the doors, 3 for the ceiling, and 3 for the floor. An effective fastening system provides fastening without the normally associated heat losses. After installation, the car is completely sealed by using a Urethane Foam Seal System, developed by Landreth Industries. Landreth technicians provide on-the-job instruction for the entire installation and sealing operation.

Landreth pre-molded Urethane foam panels can make your insulated box cars the pride of the fleet

The first completely insulated car



★ Installation of Landreth's Pre-Molded Urethane Foam panel is simple and quick. Panels are moved into production line on flat cars and lifted into cars by cranes.

★ Only 14 panels per car—panels are pre-trimmed, complete and ready to bolt into place for the sides, ends, ceiling, floor and doors.

★ Insulation thickness is reduced by one-half over conventional insulation materials.

★ A unique and effective fastening system provides fastening without the normally associated heat loss.

★ Three completed ceiling sections ready to bolt into place.

★ Three completed floor sections ready to bolt into place.

★ Landreth utilizes urethane foam machines to seal the car—insuring a complete air-tight car.

More cars are equipped with Landreth pre-molded Urethane foam panels than any other panel available on the market today

- ★ Take advantage of Landreth engineering and research staffs. The Landreth specialists can engineer and design a car to suit your needs that can be built in your own shops.
- ★ Now you can free capital that would normally be invested in special facilities, research, laboratories, engineering, and labor.
- ★ Our modern plant, operating under controlled laboratory conditions, insures proper processing to provide the highest quality panel available on the market today.
- ★ Seven foam machines equipped to provide uniform volume and temperature control of the feed streams insure fast and efficient production. By combining engineering know-how, trained personnel, modern research facilities, and quality materials, Landreth now offers the industry the most efficient pre-molded Urethane Foam Panel available today!
- ★ Landreth Industries is taking advantage of all the recent advances in technology.

Landreth pre-molded Urethane foam panels are number one today

Landreth Pre-Molded Urethane Foam Panels provide a lower K factor, as low as 0.11 (BTU's/sq. ft./hr./°F/in.) at 70 degrees as compared to 0.23 for conventional insulation. Over 90% of Urethane cells are closed. Thus, locking out moisture.

Landreth pre-molded Urethane foam panels also offer these features:

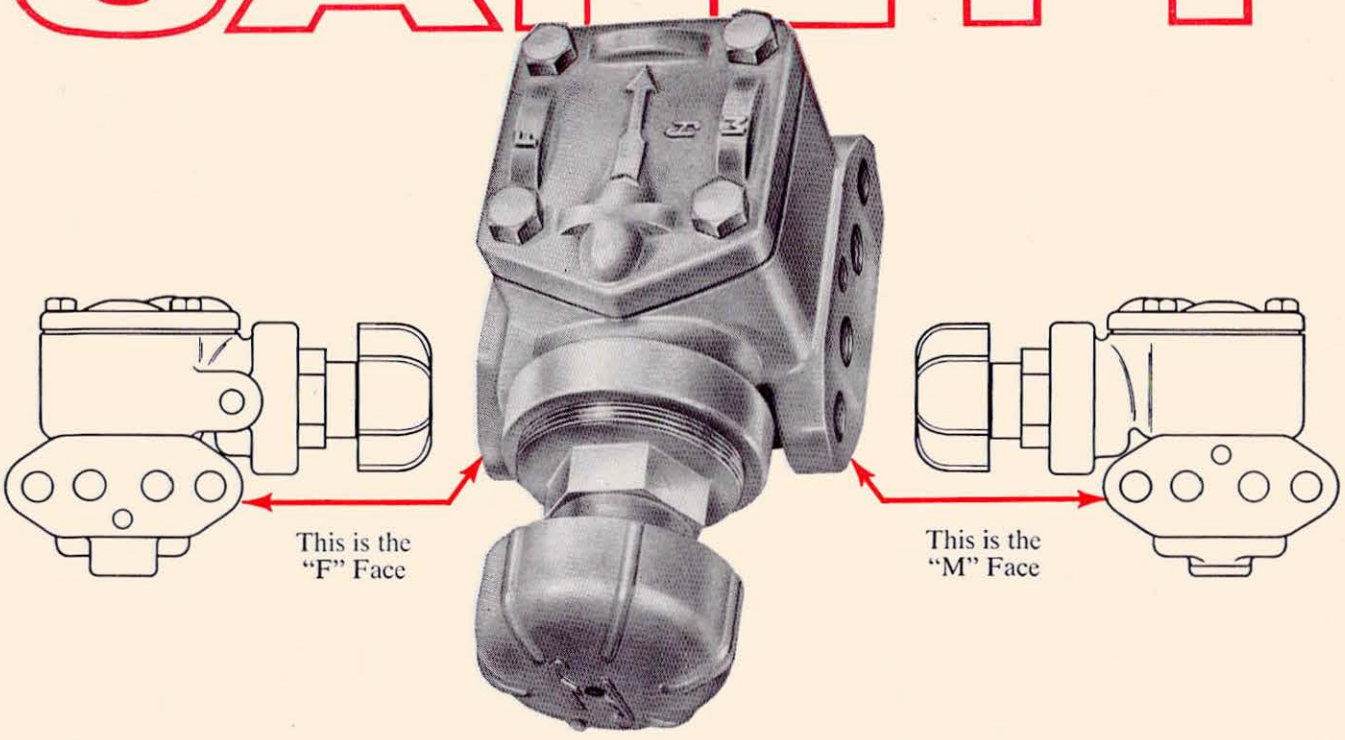
- No Air Infiltration
- No Localized Hot Spots
- Non-Burning Foam
- Easy Repairs
- Seamless Vapor Barrier
- Greater Thermal Efficiency
- Thinner Walls
- Completely Pre-Fabricated
- Guarantee No Voids
- All Seams and Bolt Holes Sealed
- No Moisture Absorbtion
- Odor Free and Non-Toxic
- Fungus and Rot Proof
- Added Structural Rigidity
- Improves With Age—Does Not Deteriorate
- Fire Proof
- Does Not Split or Settle From Road Vibration or Temperature Change

Highest quality controlled Urethane material on the market today

Landreth INDUSTRIES, INC

LANDRETH INDUSTRIES, INC.
2100 Greenwood Avenue • Evanston, Illinois • Phone: 328-2062

SAFETY



For Your Safety Control System— Use the F-6 Feed Valve

Designed for universal mounting...has two mounting faces to permit application to any existing Feed Valve mounting faces.

Small in size—large capacity . . . easiest of all Feed Valves to adjust to desired pressure.

Efficient and uniform performance over long periods of operation . . . extremely sensitive adjustment of Feed Valve pressure.

The *remote control* feature of the F-6 Feed Valve—developed by The New York Air Brake Company—adapts it perfectly as a Cut-off Valve in many Safety Control arrangements. Its universal mounting makes it possible to apply this Valve to any Feed Valve mounting face on passenger, freight or yard locomotives.

Replacement of existing Feed Valves, which do not have remote control, is supremely simple and the F-6 affords extra advantages in maintained high efficiency together with hour-saving ease of maintenance and service.

The F-6 Valve maintains exact pressure within 1 psi regardless of train leakage and has adequate capacity for charge and recharge functions.

CLEARED TO PROCEED PRI MEMBER

THE NEW YORK AIR BRAKE COMPANY

230 PARK AVENUE • NEW YORK 17, N. Y.

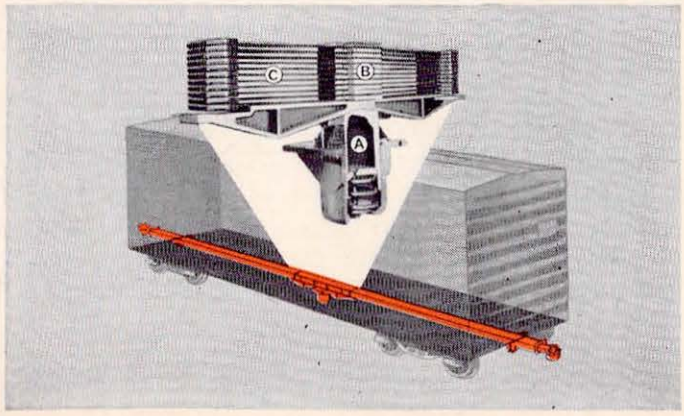
MEN WHO WEAR THESE HATS

It is significant that so many leading railroads have placed their confidence in Hydra-Cushion Underframes. Selecting the right cushioning device is a major decision. Lowest maintenance, highest performance, longest life expectancy . . . all features of Hydra-Cushion equipment . . . have to be carefully considered. We believe the Big Difference in car cushioning is the reason *more* railroads have installed Hydra-Cushion Underframes on freight cars than any other modern cushioning device.

May we tell you all about the exclusive advantages of Hydra-Cushion Underframes? There *is* a Big Difference. Write Hydra-Cushion, Inc., Dept. 45-M, 332 South Michigan Avenue, Chicago, Illinois, 60604, or 13101 Eckles Road, Plymouth, Michigan, 48170. Canadian Representative: International Equipment Company Limited, Montreal.

HYDRA-CUSHION® UNDERFRAMES

KNOW THE BIG DIFFERENCE



THIS COMBINATION MAKES THE BIG DIFFERENCE IN CAR CUSHIONING

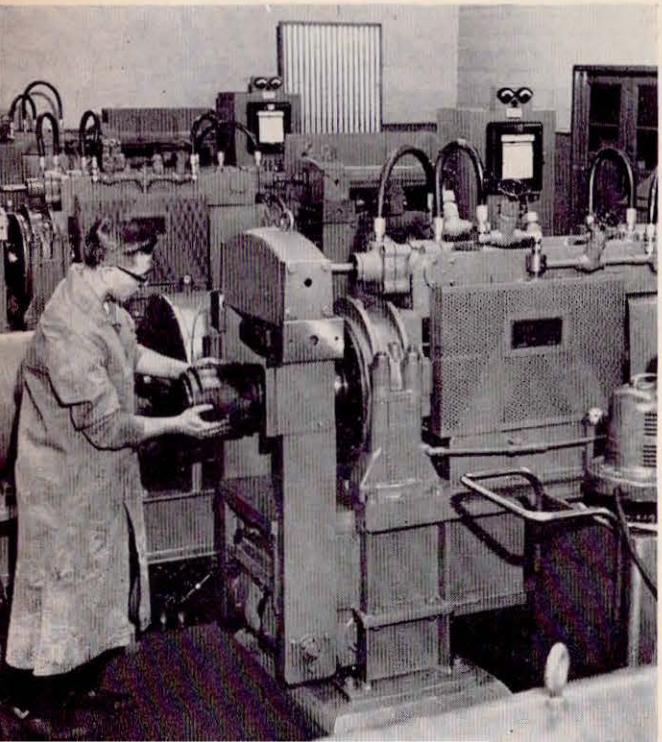
Other modern cushioning devices rely on *high-pressure hydraulics*. The unique Hydra-Cushion system's low-*pressure* upright hydraulic unit is your protection against oil loss. The hydraulic unit (A) is combined with a set of fixed (B) and movable (C) friction plates. Upon impact, the moving sill actuates the hydraulic unit which, in turn, exerts increasing pressure upon the friction plates to achieve a powerful braking action. The impact force is so reduced that damage-causing shock is eliminated. There is no jolt of recoil. Springs within the sill return it gently to normal position. Only Hydra-Cushion Underframes operate with a fraction of the hydraulic pressure of other devices.

NOW EASILY INSTALLED ON ALL TYPES OF NEW OR EXISTING CARS

ROAD PROOF OF HYATT RELIABILITY

762 MILLION*

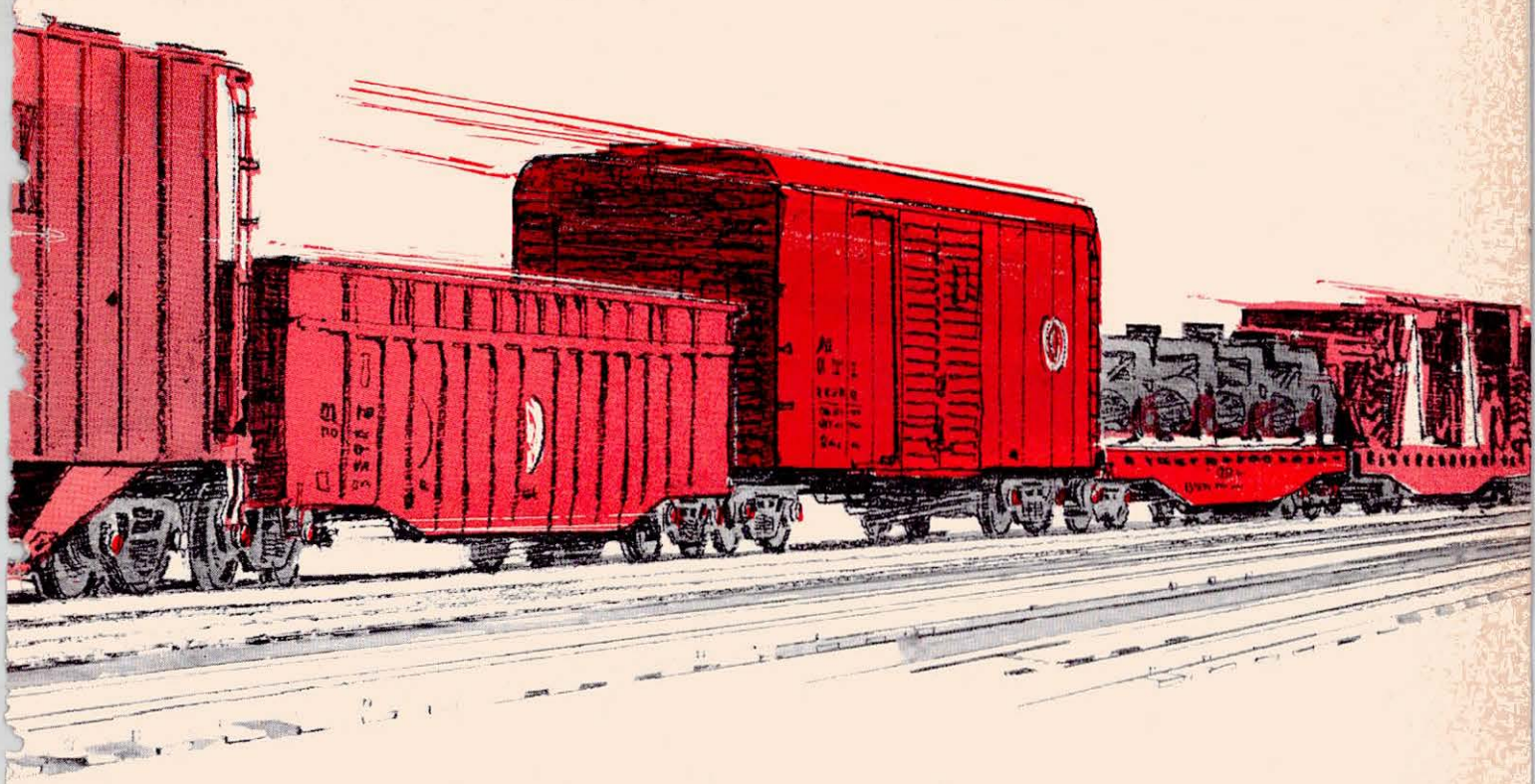
WITH ONLY ONE CONFIRMED SETOUT



LABORATORY PROOF OF HYATT RELIABILITY

Since 1959, Hyatt's test laboratory has been running continuous around-the-clock tests on freight car journal bearings. So far, Hyatt has run the equivalent of a 100-car freight train through their railroad bearing test laboratory. Over 800 Hyatt taper freight bearings have been tested in specially designed machines under far heavier radial and thrust loads and higher speeds than ever encountered in actual service. These grueling, continuing tests have helped assure *complete reliability* and *highest quality*. Specify Hyatt tapered bearings on *your* next freight car order.

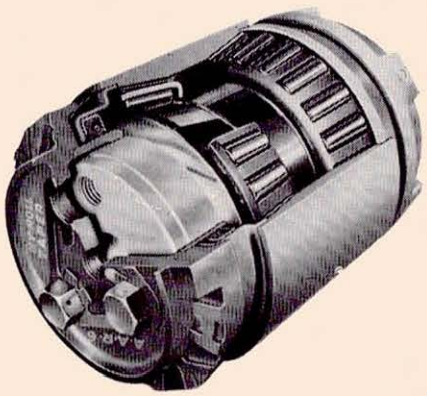
*AS OF DECEMBER 31, 1963



CAR-MILES

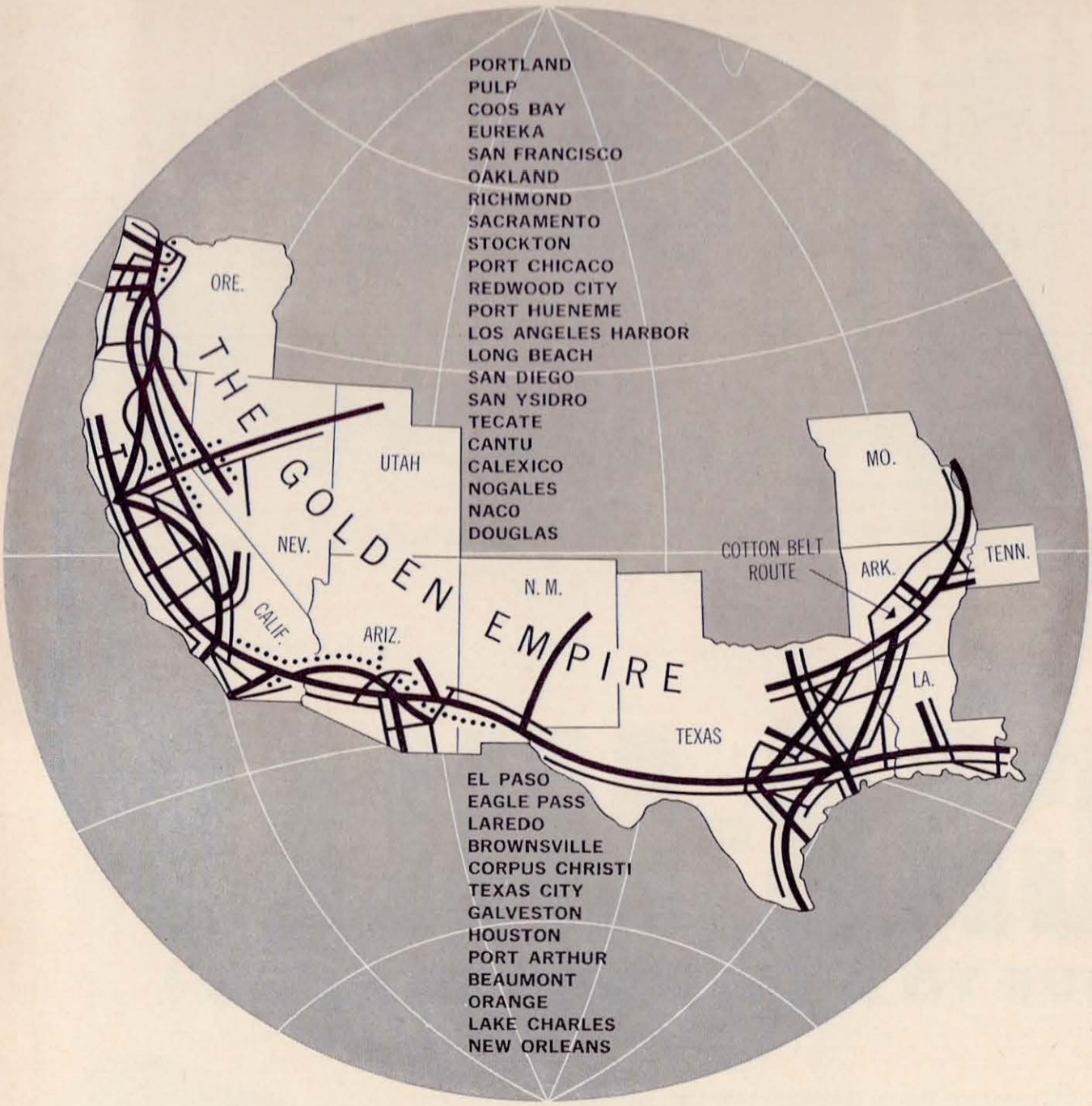
DUE TO A DEFECTIVE BEARING !

Hyatt taper freight bearings have set an exceptional service record since their introduction in 1959. Although a few Hyatt-equipped cars have been set out for various reasons, only one has been confirmed as attributable to a Hyatt tapered roller bearing. That's reliability enjoyed by 49 different railroads and private car companies operating almost 18,000 Hyatt-equipped freight cars. No wonder the sale of Hyatt taper freight bearings has jumped 40% in the past two years.



HYATT TAPERED BEARINGS
FOR NON-STOP FREIGHT

HYATT BEARINGS DIVISION, GENERAL MOTORS CORPORATION, HARRISON, N. J.



35 gateways to the world

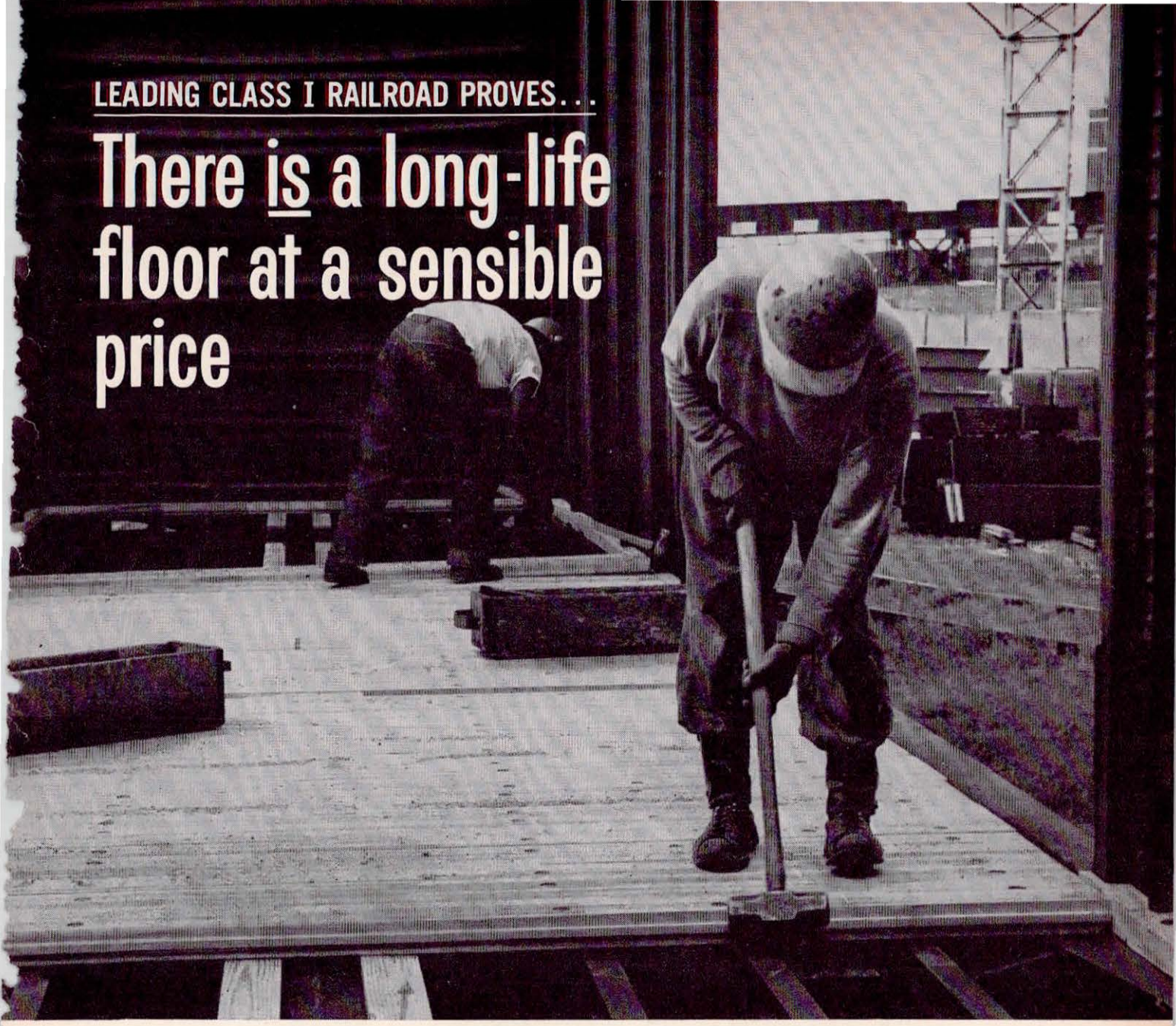
When you route your import-export shipments via Southern Pacific, you can take your choice of 35 ports of entry on the West Coast, Gulf Coast and Mexican border. You can also take advantage of S.P.'s specialized services—for money-saving ideas on crating and loading, and up-to-the-minute information on schedules, insurance, and customs procedures. For help with your next foreign shipment, call S.P. —the carrier with a century of import-export experience.

Southern Pacific

Serving the Golden Empire with TRAINS • TRUCKS • PIGGYBACK • PIPELINES
Traffic representatives in principal cities throughout the U. S.

LEADING CLASS I RAILROAD PROVES...

There is a long-life floor at a sensible price



It saves you $21.95 (or more) per car per year!

Independent cost calculations by a leading Class I railroad reveal that Dura-Wood flooring for freight cars yields substantial savings over a 15-year period.

In the average 40′ 6″ box car, the railroad says Dura-Wood saves $21.95 per year over steel and $30.93 per year over flat-sawn pine, which requires frequent renewal. In 50′ 6″ box cars and 60′ baggage cars the savings with Dura-Wood run as high as $95.76 per car per year.

Dura-Wood is strong, durable, easy to install, and reduces cargo claims. It has been certified "twice as uniform in strength" as flat-sawn oak by the Wood Technology Laboratory, University of Michigan. Send coupon today for the full story.

Bruce Dura-Wood®

LAMINATED EDGE-GRAIN FREIGHT CAR FLOORING

A product of E. L. BRUCE CO. INCORPORATED
World's largest maker of hardwood flooring
Memphis, Tennessee

E. L. Bruce Co. Incorporated
1586 Thomas St., Memphis, Tenn. 38101

Please send information on new Bruce Dura-Wood freight car flooring as checked:

☐ Full details on Dura-Wood features.
☐ Cost comparisons by Class I railroad.

Name_____

Company_____

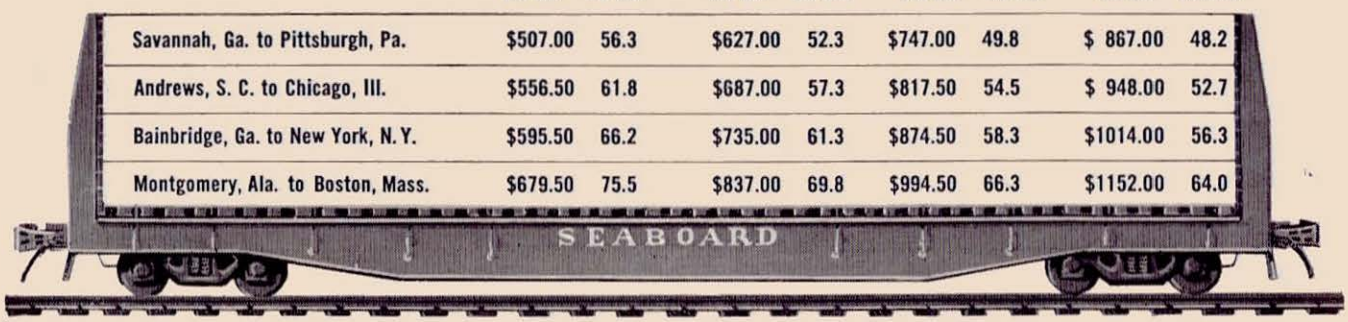
Address_____

Larger lumber cars– Lower lumber rates!

SEABOARD is now receiving delivery of 150 new and bigger lumber cars of 180,000-pound capacity, with 10-foot 3-inch high end bulkheads spaced 61 feet apart, and with 10-inch hydraulic draft gears. *They are among the most modern on rails.*

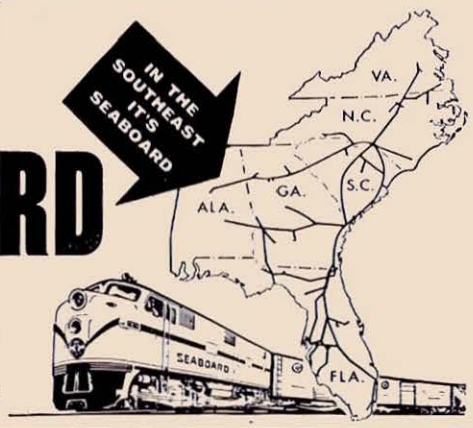
SEABOARD'S INCENTIVE RATES on lumber make possible greater savings than ever before. Here are a few examples:

	90,000 pounds		120,000 pounds		150,000 pounds		180,000 pounds	
	Dollars Per Car	Cents Per 100 lbs.	Dollars Per Car	Cents Per 100 lbs.	Dollars Per Car	Cents Per 100 lbs.	Dollars Per Car	Cents Per 100 lbs.
Savannah, Ga. to Pittsburgh, Pa.	$507.00	56.3	$627.00	52.3	$747.00	49.8	$ 867.00	48.2
Andrews, S. C. to Chicago, Ill.	$556.50	61.8	$687.00	57.3	$817.50	54.5	$ 948.00	52.7
Bainbridge, Ga. to New York, N. Y.	$595.50	66.2	$735.00	61.3	$874.50	58.3	$1014.00	56.3
Montgomery, Ala. to Boston, Mass.	$679.50	75.5	$837.00	69.8	$994.50	66.3	$1152.00	64.0



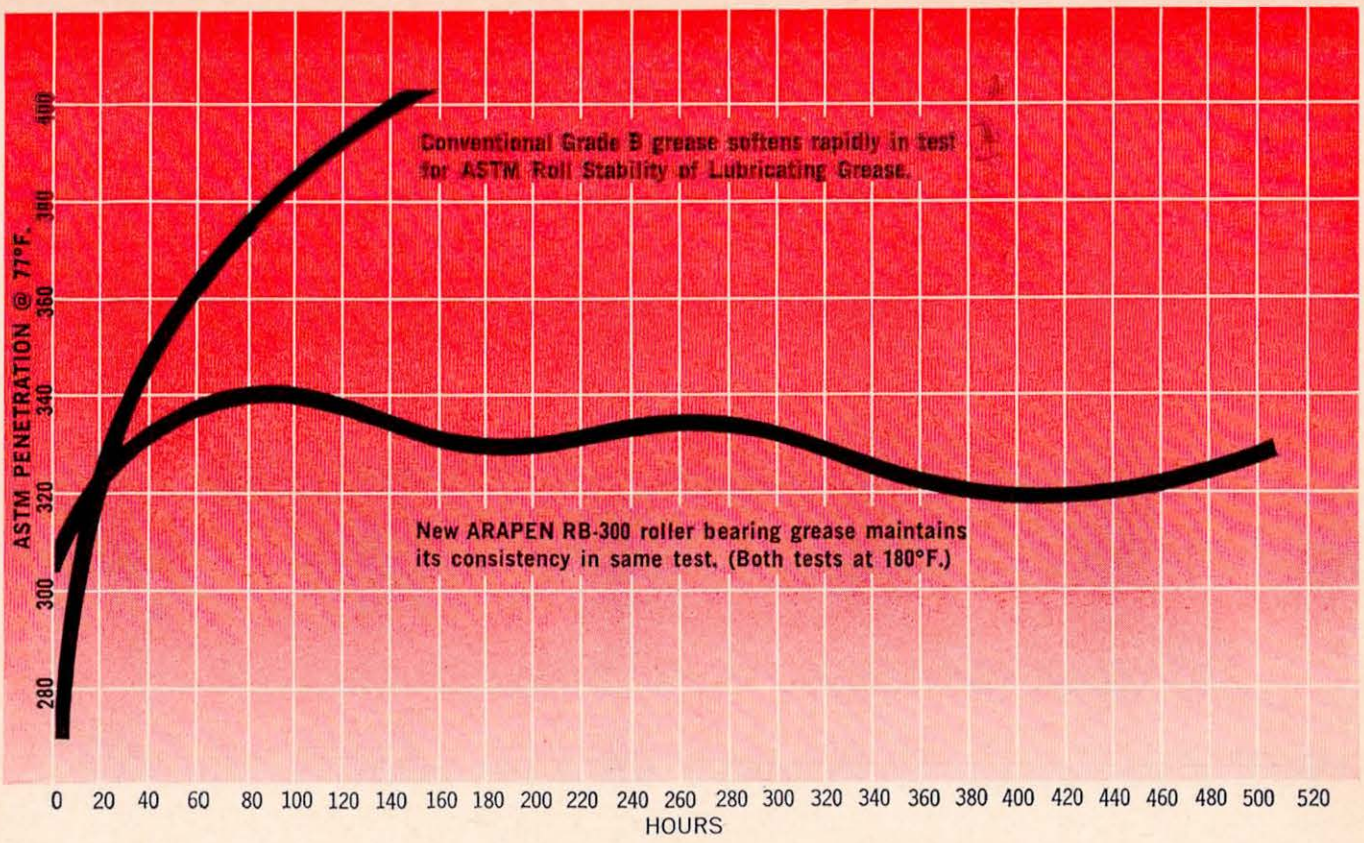
The combination of new, larger equipment for *many* specialized shipping purposes, plus rates based on "*The more you ship the less the cost,*" is part of what we mean by Seaboard Superior Service.

You'll find this slogan also lives up to its promise when you contact your Seaboard representative about your shipping needs in the Growing Southeast. The way he grasps the problem and comes up with the answer will convince you that *you've come to the right place!*



SEABOARD
AIR LINE
RAILROAD

THE ROUTE OF COURTEOUS SERVICE


Conventional Grade B grease softens rapidly in test for ASTM Roll Stability of Lubricating Grease.
New ARAPEN RB-300 roller bearing grease maintains its consistency in same test. (Both tests at 180°F.)
ASTM PENETRATION @ 77°F.
280
300
320
340
360
380
400
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 500 520
HOURS

Compare roller bearing greases at 180°F and see why new ARAPEN® RB-300 stays put better!

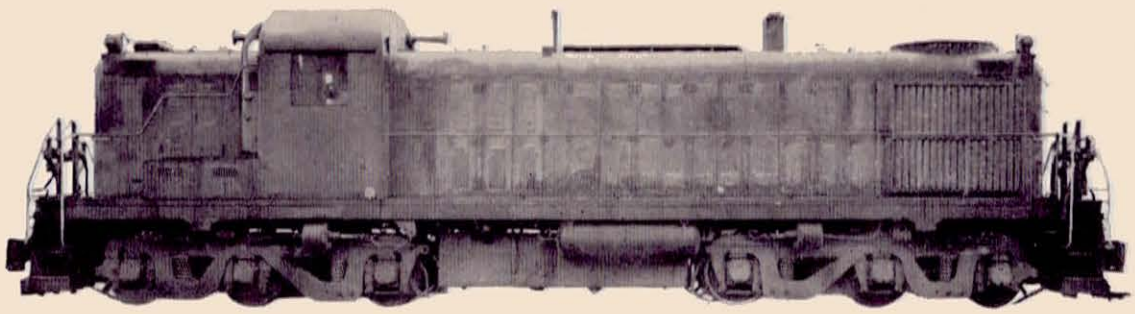
If you want extra leakage protection at full operating temperatures, take a good look at the virtually unchanging penetration of ARAPEN RB-300 in a Roll Stability Test. After 140 hours at the elevated temperature of 180°F., Humble's new roller bearing grease shows only *one-fifth* as much change in penetration as a conventional AAR approved Grade B product. And the penetration of ARAPEN RB-300 remained essentially constant for an additional 360 test hours with no sign of oil seepage.

Why not give all your roller bearings this superior protection. New ARAPEN RB-300 is typical of many advanced railroad products developed by Humble research to help you improve reliability and cut costs. You can get fast delivery coast-to-coast from convenient supply points. Call our local Railroad Representative, or write Humble, Railroad Sales in Houston, Texas.

Note: ARAPEN RB-300 and the softer ARAPEN RB-350 are approved under AAR M-917-63.

HUMBLE OIL & REFINING COMPANY ...AMERICA'S LEADING ENERGY COMPANY...FIRST IN RESOURCES / FIRST IN CAPABILITY

Esso



We'll give you up to $60,000 on a locomotive like this...

Here's how ALCO does it:

We'll take the reusable parts from your old locomotive (primarily the traction motors and trucks; main generator, exciter and auxiliary generator; dynamic brake blower and switch) and credit you with up to $60,000 toward a new ALCO Century.

ALCO's New-Power Program offers you a return of your investment in as little as three to five years.

Cash required is low. So is Century fuel consumption. And maintenance cost.

Choose the ALCO Century that best meets your requirements. Century 420: four motors, 2000 hp. Century 424: four motors, 2400 hp. Century 628: six motors, 2750 hp —America's most powerful single-engine locomotive. The most flexible line of motive power ever offered by a locomotive builder.

Your Century will have many special features designed to reduce maintenance and improve performance every day of your locomotive's life. Including:

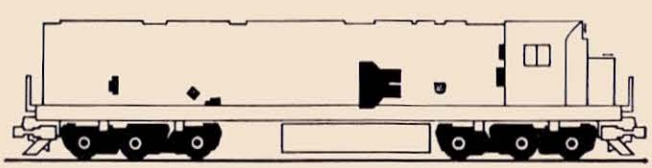
The lowest parasitic hp load of any locomotive. A big fuel saver.

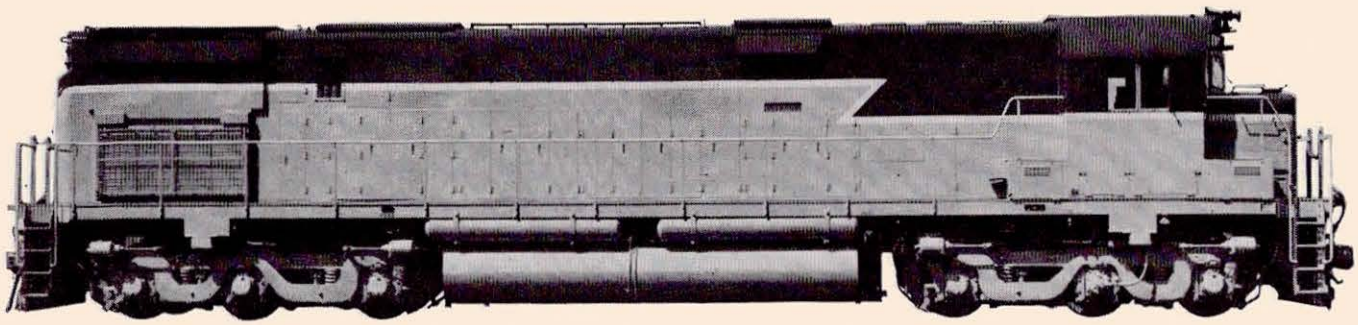
Sealed electric control compartment. The most modern and complete static control system in service today.

An improved temperature control system. New air-handling system.

An automatic wheel slip control that is the most efficient in the business combined with better over-all weight distribution reduces wear on wheels and brake shoes.

All this, plus new removable radiator and engine hoods; new hinged engine compartment doors that give fast access to all engine cylinders; and walk-in access to the main generator. All designed to cut your maintenance costs and downtime.





toward a new performance-proved ALCO Century like this.

And instead of your tired old diesel, you get the famous ALCO 251 engine. Built to cut your operating costs and boost your profits. Because it burns up to 10% less fuel. And slashes your maintenance costs with a 48-month top-deck overhaul cycle.

What makes ALCO's 251 the most powerful, durable, economical diesel engine on the rails today? Advanced thermal engineering. Simplified design. Built with extra strength and rigidity.

Featuring an exhaust gas-driven, water-cooled turbocharger with only one rotating assembly. Designed to operate efficiently at all altitudes and temperatures. Free-running at all speeds and loads.

Chrome plated cylinder liners that feature an improved seal, together with fully replaceable lower liner seats.

A charge-air aftercooler that reduces input air temperature to improve combustion and prolong engine life.

Grooveless bearing design that provides greater oil-film thickness, results in a 70% higher load-carrying capacity than grooved bearings can supply.

Interchangeable air and exhaust valves. And stellite valve-seat inserts.

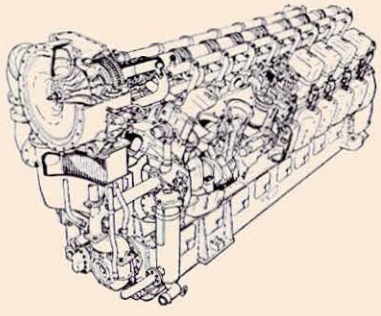
Newly-developed exhaust manifolds for longer life and easier maintenance.

And a hardened crankshaft, specially counterweighted to minimize main bearing loads and internal forces.

Sound interesting? Need more information?

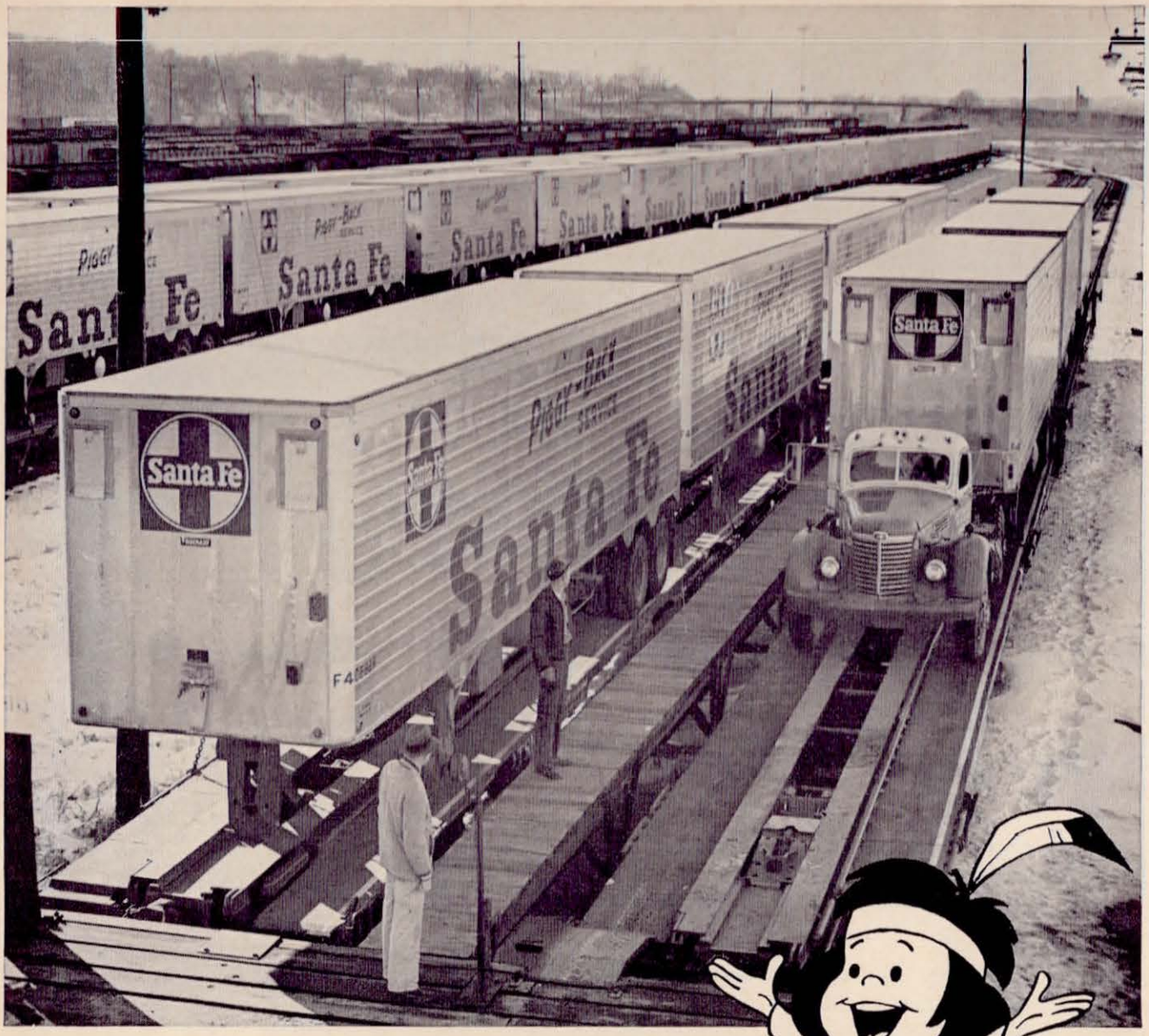
Your ALCO man has all the details on ALCO's New-Power Program, and how it can cut your operating costs. And increase your profits.

All you need is an old locomotive.



ALCO

ALCO PRODUCTS, INC., 530 FIFTH AVENUE, NEW YORK, N.Y., 10036



Santa Fe the PIGGY-BACK way

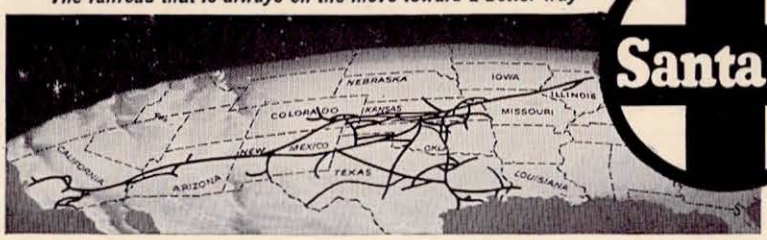
Si! Si! Chico. This modern service is so big on the Santa Fe almost every train now carries piggy-back cars.

Santa Fe's Piggy-Back fleet is one of the most modern in the nation with trailers of all types: refrigerated for perishable and frozen foods; insulated to protect special commodities; flat beds for shipment of unusual sizes and shapes.

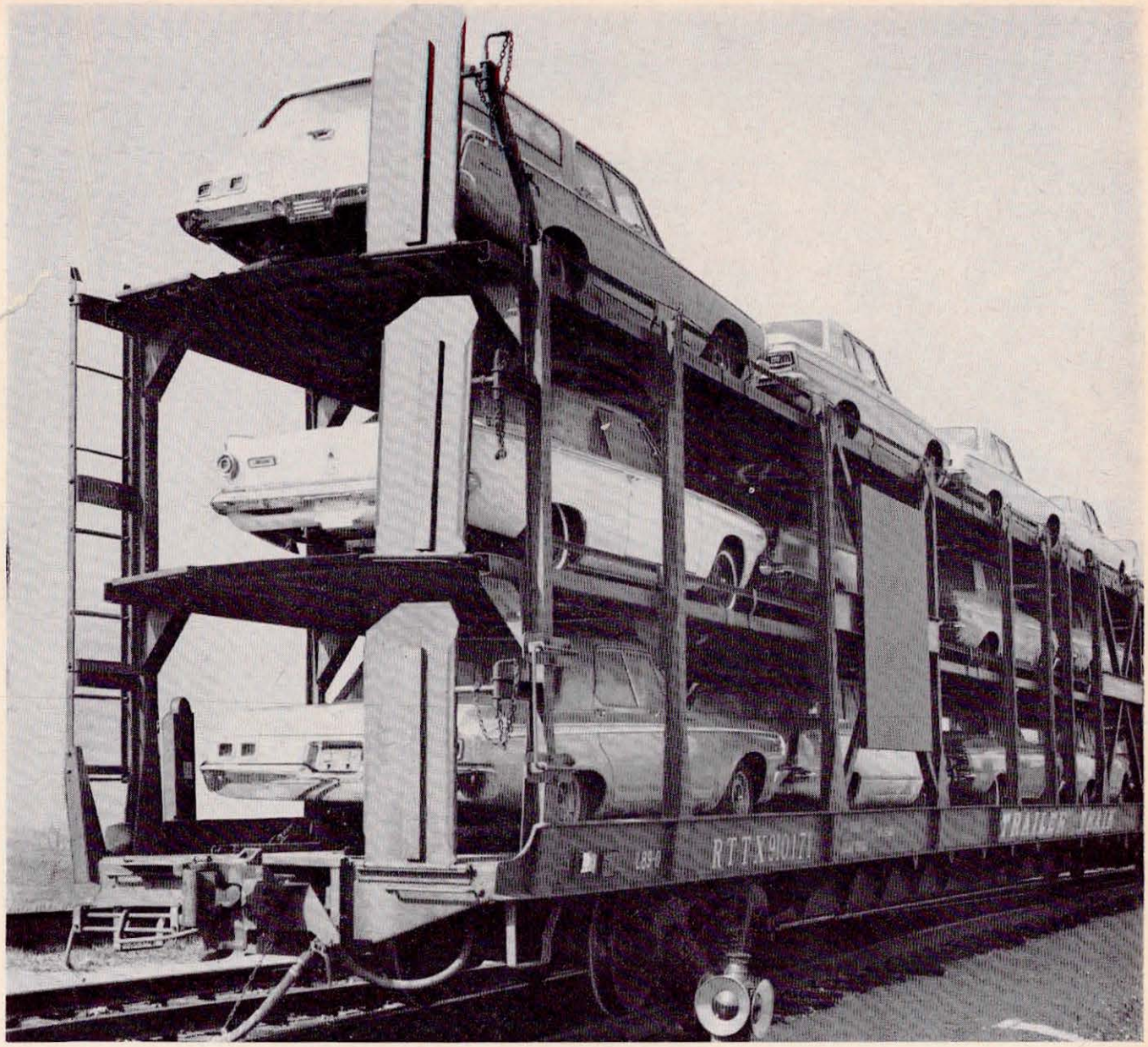
New trailers are now on order to take care of your growing needs for Santa Fe Piggy-Back service. More are to be added as a part of our program of "keeping always on the move toward a better way" to serve you.

The railroad that is always on the move toward a better way

Let your nearest Santa Fe representative give you the facts about piggy-back



Santa Fe



These FreightMaster Features That Work For Trailer Train Will Work For You, Too

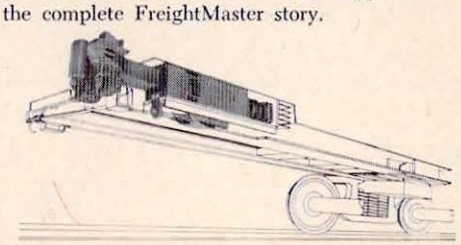
FreightMaster is unaffected by car camber – End-of-car location of the FreightMaster units permits any degree of car camber without lessening cushioning effectiveness or influencing operation of the cushioning system.

FreightMaster helps protect lading and car structures – FreightMaster cushioned cars absorb draft or buff shock forces in the two independent FreightMaster units at either end of the car. All car components, *including the center sill*, are protected by the hydraulic action of the FreightMasters.

FreightMaster also:

- Can be installed in almost any type of old or new car with either standard or special center sill.
- Helps protect adjoining cars.
- Requires *no* periodic maintenance. Units are sealed at the factory with a permanent supply of hydraulic fluid.

Make the move to FreightMaster – Your claims will be smaller, your cars will last longer, and your customers will stay happier! Write today for the complete FreightMaster story.

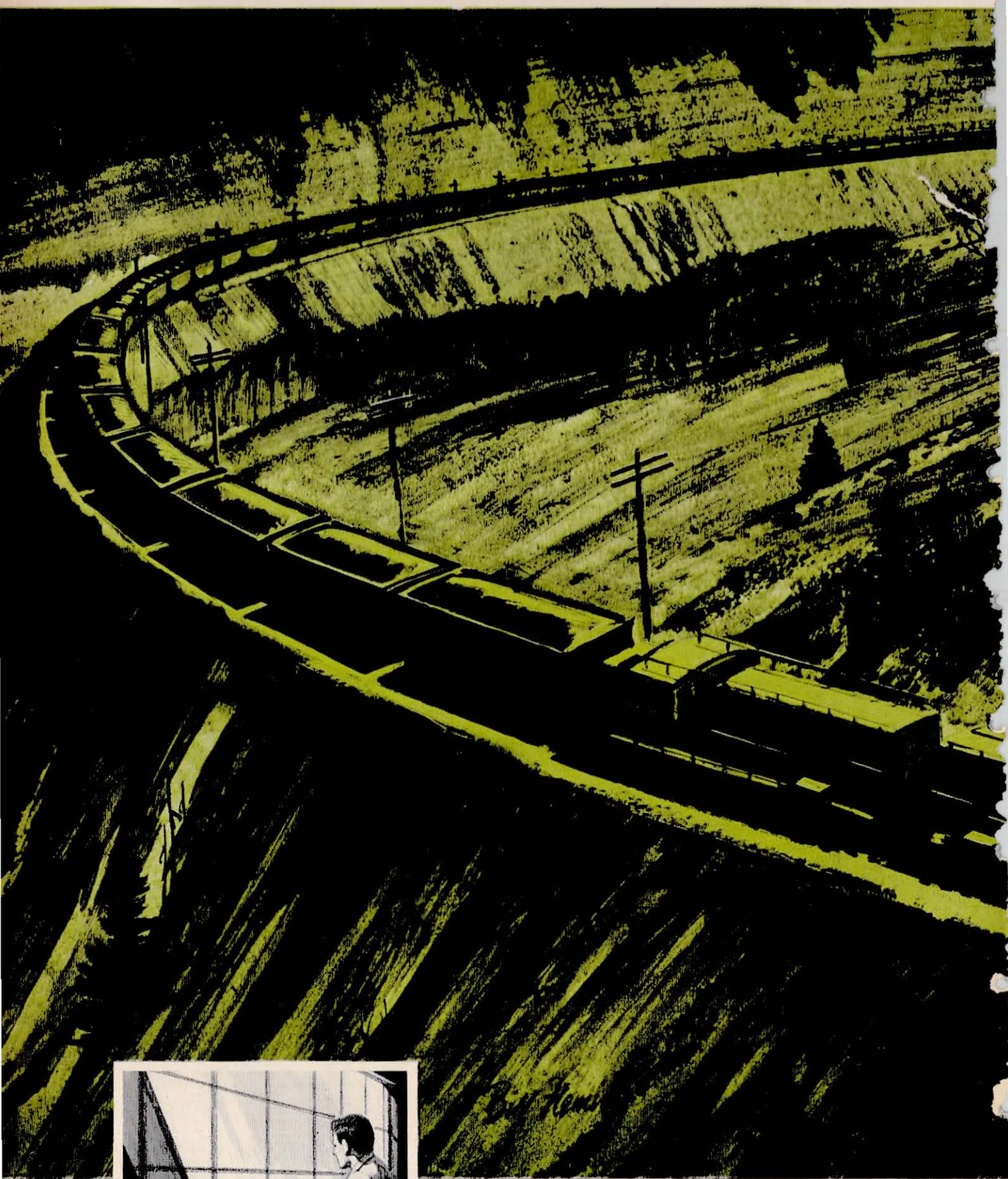


FreightMaster®

END-OF-CAR HYDRAULIC CUSHIONING DEVICES

424 W. Vickery Blvd., Fort Worth, Texas (817) ED 5-3046 ▪ A DIVISION OF **Halliburton** COMPANY

Another report on railroad progress from American Oil Company



*Train Load

A TERMINAL LOOP and modern loading facilities are essential to unit train economy.

TL* PROGRESS-UNIT TRAINS MULTIPLY ON THE PENNSYLVANIA RAILROAD

ARTIST'S VERSION of a Pennsylvania RR. unitized coal train.

Unit trains, according to one PRR official, are "the third stage in the post-war revolution in railroading"—a marketing concept following dieselization and piggyback. The Pennsylvania Railroad, with its first unit train dating back to May, 1961, must be counted among the pioneers in this "third stage."

Today, the Pennsy operates unit trains on four different runs of its own and cooperates with connecting railroads on two other runs. These routes, and others being developed, range from 40 to 400 miles, one way. The trains have from 64 to 105 permanently assigned cars.

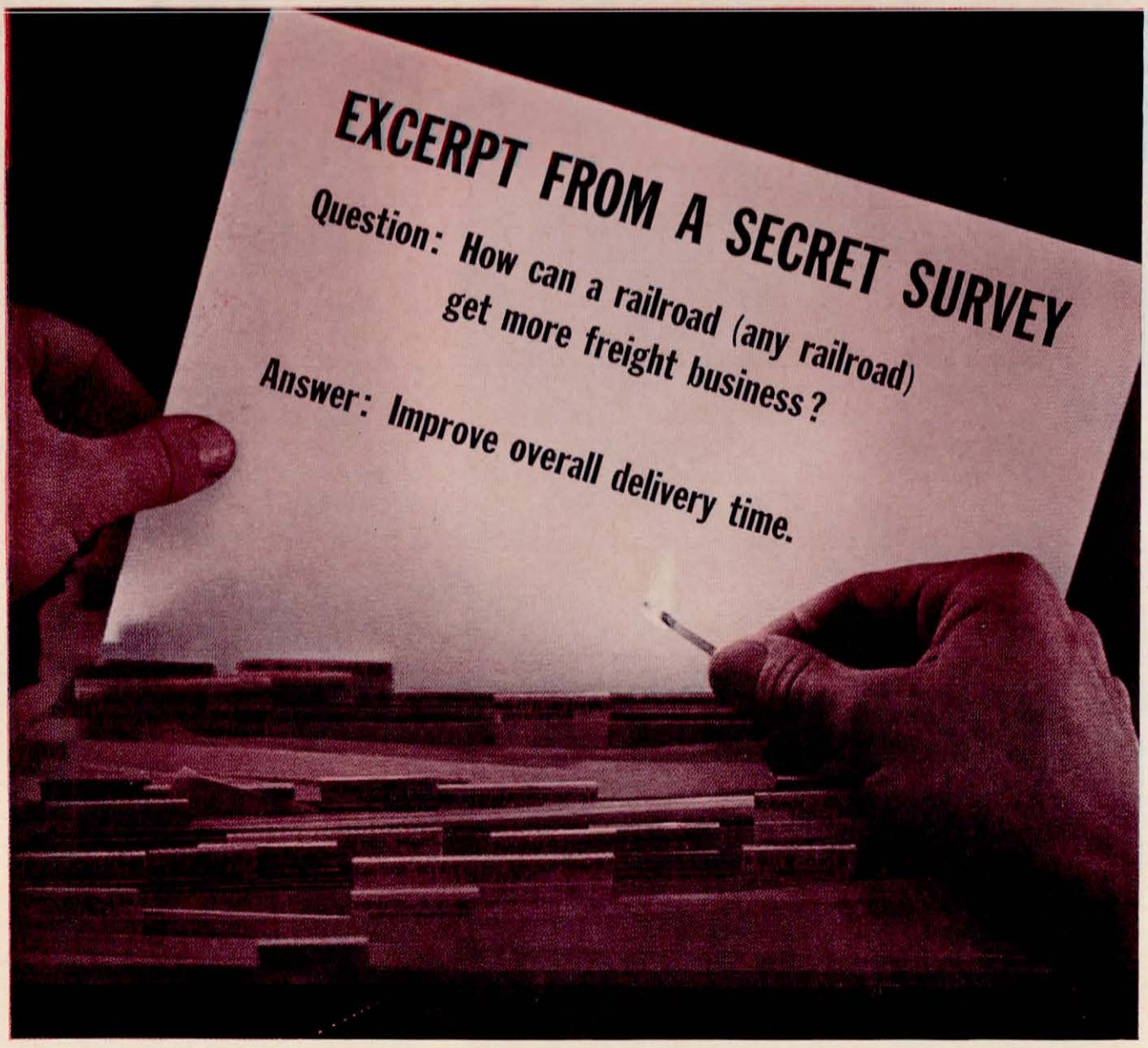
One pair of unit trains handles an assignment ordinarily regarded as a future development—hauling bulk cargoes other than coal. "Gravel Gertie," as these trains are collectively and affectionately known, has carried gravel over a 40-mile route in Ohio since 1961.

Even as they study additional unit train applications today, Pennsylvania Railroad officials see this as a step in the transition to the specially designed and built integral trains of the future.

Unit trains are an example of the progressive railroading practiced by the Pennsylvania management. The PRR is one of many railroads served by the technical assistance, research and petroleum products of American Oil Company.

AMERICAN

AMERICAN OIL COMPANY
910 South Michigan Avenue, Chicago 80, Illinois


EXCERPT FROM A SECRET SURVEY
Question: How can a railroad (any railroad) get more freight business?
Answer: Improve overall delivery time.

AND THAT'S WHAT THE READING RAILROAD IS DOING!

A representative group of shippers were recently questioned by a highly-confidential survey known as The Alderson Report. Their answers have reconfirmed a well-known Traffic Industry fact. On-Time-Delivery is a big selling point. And in many cases it is the most important thing a shipper looks for in selecting a railroad.

Reading is the railroad that gives dependable On-Time-Delivery and shows its figures to prove it!

	Jan. 1964	Feb. 1964	Mar. 1964
Trains Operated	1,288	1,375	1,507
Made Schedule	616	783	1,097

(*for Scheduled Symbol freight trains*)

And, every month, our on-time performance is going to get better and better.

Since On-Time-Delivery is so important to our customers and prospects, it's doubly important to us. That's why every member of the Reading Top Management receives On-Time and Delay reports twice a day from our fully automated computer center. And the proper man acts on each reported problem *immediately*.

O-T-D is an important reason why you owe it to your company to take a new look at the Reading.

For more information, contact T. H. Ramsey, Vice President, Freight Sales, Reading Railroad, Philadelphia, Penna. 19107—or your local Reading representative.

Reading Lines

READING RAILROAD

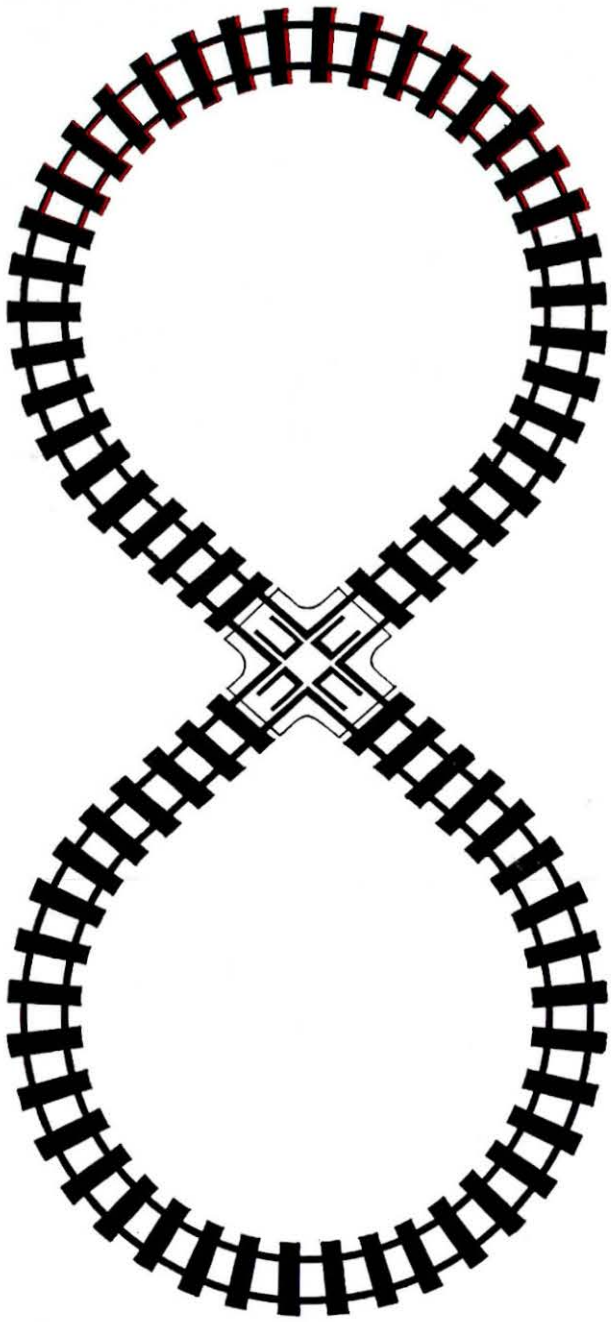


FIGURE EIGHT

8 completely stocked warehouses to serve you!

This is an important figure in your future planning. Now you can get Clevite bearings for EMD engines from *eight* strategic locations: CLEVELAND • DALLAS • LOS ANGELES MINNEAPOLIS • ST. LOUIS • SACRAMENTO KANSAS CITY • ST. THOMAS, ONTARIO. This means the Clevite bearing is not only the *strongest* on the market; now it's the most readily available! This enables you to minimize stores expense. And Clevite's exclusive overlay with 3% copper makes it up to five times stronger than any other bearing overlay. See for yourself. Contact —Clevite Corporation, Cleveland Graphite Bronze Div., 17000 St. Clair Avenue, Cleveland 10, Ohio.

CLEVITE
CORPORATION

These double doors are 20 ft wide

yet one man can easily open them because they're built of aluminum

Railroads have solved a loading and unloading problem by putting 20-ft wide double-plug doors on their mammoth new cars. Aluminum doors cut maintenance costs, reduce down time, last the life of the car and open up exciting new concepts in shipper-pleasing innovations. Two fork-lift trucks can operate in these giant openings at the same time.

Interested? Alcoa works continuously with America's railroads, car builders and shippers to develop weight-saving answers to heavyweight problems by using *aluminum . . . what can we do for you?* Call your nearest Alcoa sales office. Or write Aluminum Company of America, Railroad Division, 1765-E Alcoa Building, Pittsburgh, Pa. 15219.

*Load-bracing aluminum bulkheads are installed in these cars to protect bulky auto-parts racks. Of giant proportions, these bulkheads can be operated by one man because they are built of aluminum.

ALCOA BRINGS YOU AMERICA'S FINEST NEWS SHOW . . . **THE HUNTLEY-BRINKLEY REPORT**, ON NBC-TV

ALCOA

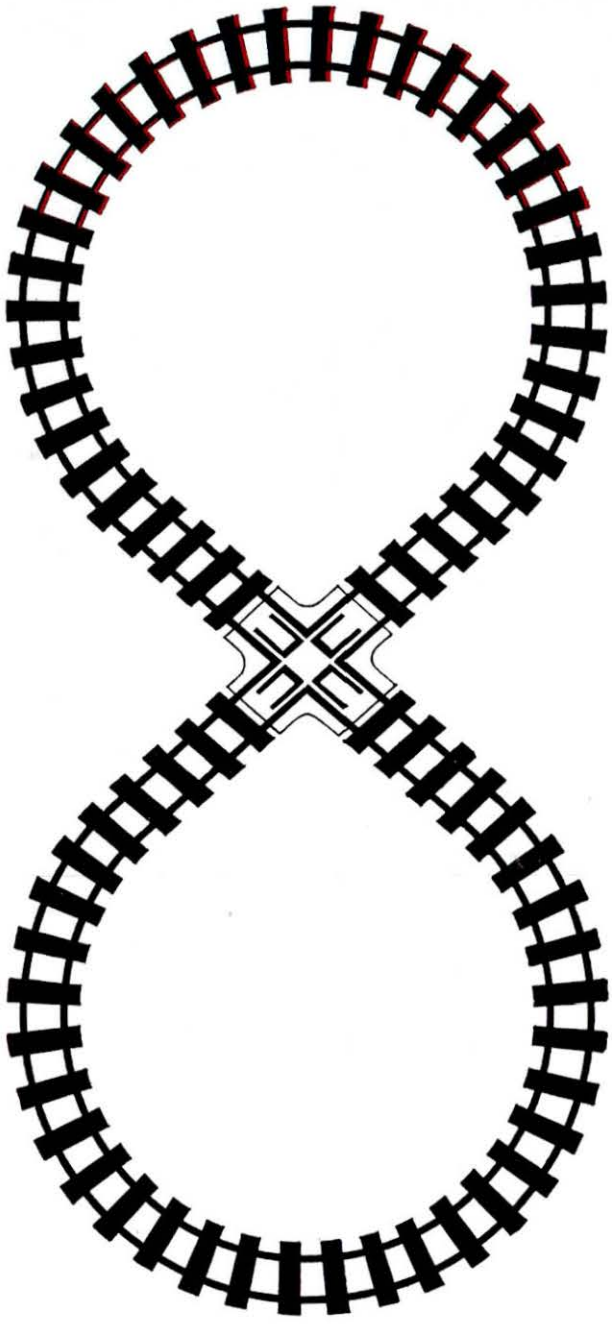


FIGURE EIGHT

8 completely stocked warehouses to serve you!

This is an important figure in your future planning. Now you can get Clevite bearings for EMD engines from *eight* strategic locations: CLEVELAND • DALLAS • LOS ANGELES MINNEAPOLIS • ST. LOUIS • SACRAMENTO KANSAS CITY • ST. THOMAS, ONTARIO. This means the Clevite bearing is not only the *strongest* on the market; now it's the most readily available! This enables you to minimize stores expense. And Clevite's exclusive overlay with 3% copper makes it up to five times stronger than any other bearing overlay. See for yourself. Contact —Clevite Corporation, Cleveland Graphite Bronze Div., 17000 St. Clair Avenue, Cleveland 10, Ohio.

CLEVITE
CORPORATION

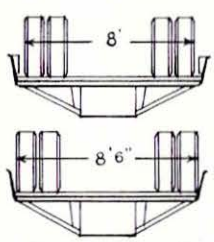
PIGGYBACKING USA:

What's Piggybacking USA? It's moving more than a million truck-trailer loads a year through searing heat and numbing cold. It's carrying over two million new automobiles to dealer showrooms to meet the car buying demands of the American public. It's providing a new system of distribution that links the economies of rail transportation with the mobility of over-the-road truck-trailer pick-up and delivery.

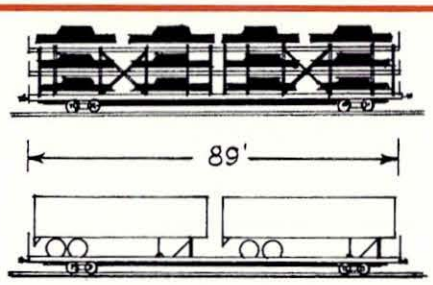
Equipment has to be tough to take the punishment of around the clock, every day, all year, piggyback service. Also, equipment has to be versatile to accept the different lengths and types of truck-trailers or the various designs of tri-level and bi-level auto racks. That's why Trailer Train has selected Pullman-Standard as a major supplier of piggyback equipment. Trailer Train knows from experience that Pullman-Standard flat cars, like the PS-4PB, will stand up to the rugged service demands of its member roads.

When introduced in 1958, the PS-4PB Flat Car helped Trailer Train get piggybacking rolling . . . and in doing so earned a reputation for hard work and dependability. Now the PS-4PB has undergone its first major change—an increase in deck length to 89'. This added length means the new model PS-4PB will accept longer 1964 design auto racks.

For an illustrated brochure on the new 89' PS-4PB Flat Car contact your nearest Pullman-Standard sales office



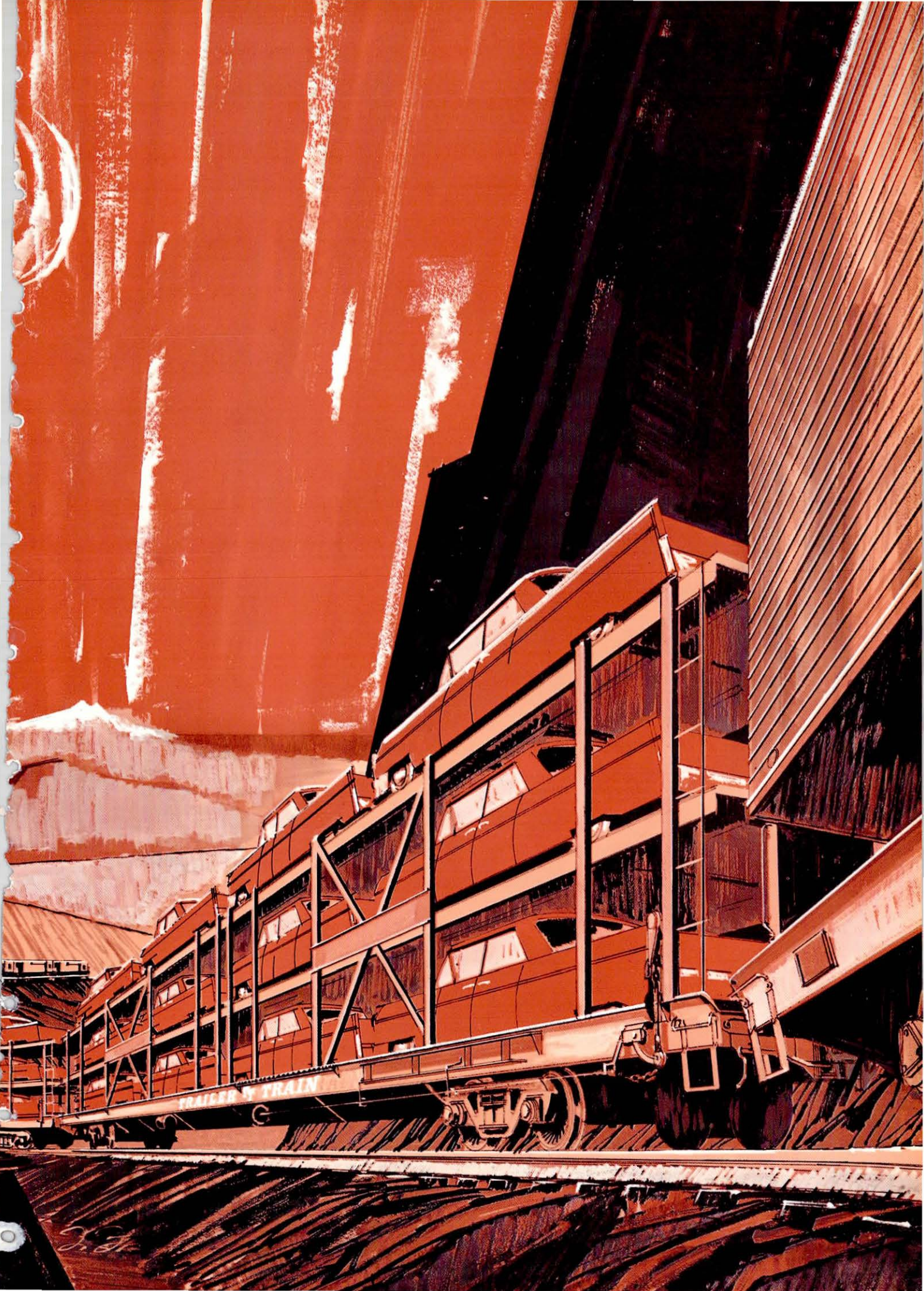
Convertible Side Sill
For 8'0" and 8'6" trailer widths.

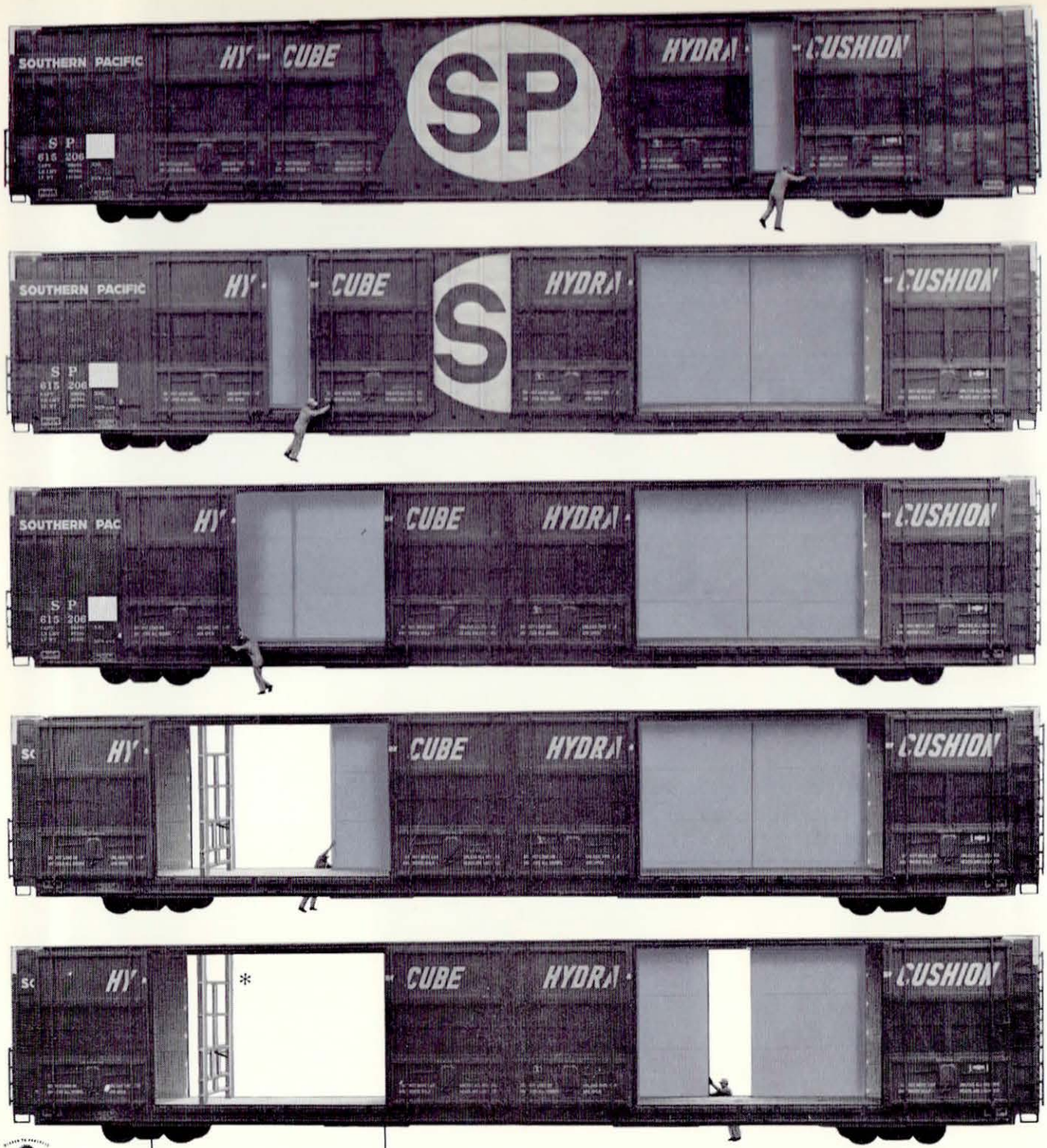


New 89' Length
Ideal for all auto rack applications and all lengths and types of truck-trailers.

PULLMAN-STANDARD

A DIVISION OF PULLMAN INCORPORATED
200 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS
BIRMINGHAM • PITTSBURGH • NEW YORK
J. C. FENNELLY CO., REPRESENTATIVE


TRAILER by TRAIN



These double doors are 20 ft wide

yet one man can easily open them because they're built of aluminum

Railroads have solved a loading and unloading problem by putting 20-ft wide double-plug doors on their mammoth new cars. Aluminum doors cut maintenance costs, reduce down time, last the life of the car and open up exciting new concepts in shipper-pleasing innovations. Two fork-lift trucks can operate in these giant openings at the same time.

Interested? Alcoa works continuously with America's railroads, car builders and shippers to develop weight-saving answers to heavyweight problems by using *aluminum . . . what can we do for you?* Call your nearest Alcoa sales office. Or write Aluminum Company of America, Railroad Division, 1765-E Alcoa Building, Pittsburgh, Pa. 15219.

*Load-bracing aluminum bulkheads are installed in these cars to protect bulky auto-parts racks. Of giant proportions, these bulkheads can be operated by one man because they are built of aluminum.

ALCOA BRINGS YOU AMERICA'S FINEST NEWS SHOW . . . **THE HUNTLEY-BRINKLEY REPORT**, ON NBC-TV

ALCOA

What is your general reaction to the TOFC rules proposed by the ICC in Ex Parte 230?

Approve	31
Disapprove	0
No opinion	4

Do you think the rules will accomplish their stated purpose of promoting the growth of TOFC?

Yes	28
No	2
Will make no important difference	4

How do you think they will affect your own company's use of TOFC?

Will increase it	13
Will decrease it	0
Will lead us to begin using it	1
Will make no important difference	18

Shippers assess ICC piggyback rules

Industrial traffic men see some benefits to themselves from Ex Parte 230, but think it may be more helpful to carriers.

By the ground rules it laid down in Ex Parte 230 (RA, April 13, p. 12), the Interstate Commerce Commission has given piggybacking a green light.

That is the nearly unanimous opinion of shippers answering this month's Poll.

But some of them warn that there may still be slow orders ahead, in the path of TOFC's future progress.

It is G. W. Albertson, general traffic manager, F. W. Woolworth Co., New York, who says "The encouraging tone of the ICC remarks will act as a green signal for the carriers to go ahead in implementing the various plans under clear cut tariff provisions." Users of TOFC, he thinks, should benefit.

Other respondents are in substantial agreement. F. J. West, traffic manager, Drackett Co., Cincinnati, believes "the new rules have cleared the air in many areas." W. S. Franklin, general traffic manager, Brown Forman Distillers Corp., Louisville, Ky., thinks "clarification of rules, standardization of practices, and publication of all rates and charges will cause TOFC to become recognized as one of the standard modes of transportation. Its availability to all persons at like cost, and the continued practice of leasing equipment, will promote its use."

● **Piggyback comes of age.** A. S. Daviau, traffic manager, Mennen Company, Morristown, N.J., looks for "tremendous improvement in over-all piggyback service" because the Commission's decision in Ex Parte 230 "really clarified many issues regarding TOFC services. It removed the 'black eye' which many of the railroads' competitors have given TOFC, and has, so to speak, made piggyback come of age."

Somewhat similarly, W. K. Cabot, GTM, Johnson & Johnson, New Brunswick, N.J., expects that there will now be "some real efforts to establish coordinated motor-rail routes and rates."

From Camden, N.J., E. J. Derenthal, director, traffic and transportation, Radio Corporation of America, writes that "the decision has reaffirmed the past course of development, and indicated directions for the future."

In much the same vein, W. D. Wagstaffe, assistant traffic manager, California Packing Corp., San Francisco, agrees that "affirmative interpretation of TOFC rules by the ICC was essential at this stage of piggyback development. There were enough twilight zones to impede its orderly growth." He goes on to say that "the restrictions imposed are reasonable and of limited scope. They can be placed in the category of guidance rather than restrictive."

The requirement for showing leasing costs of equipment "will be a big help," in the opinion of R. A. Stuart, general warehousing and traffic manager, Whitehall Laboratories Division, American Home Products Corp., New York.

● **Slow orders ahead?** Some traffic managers, however, even while generally approving the ICC's action, still retain some doubts as to the future course of piggybacking. These doubts appear to revolve principally around cost factors and the 60/40 commodity mixing rule.

One of the questioners is M. E. Coughlin, director of traffic, Thomas J. Lipton, Inc., Englewood Cliffs, N.J. "The basic question revolves around the railroads' disposition of the mixture provisions on Plan III rates," he says. If this could be eliminated, he suggests, it would have a positive or affirmative effect on TOFC.

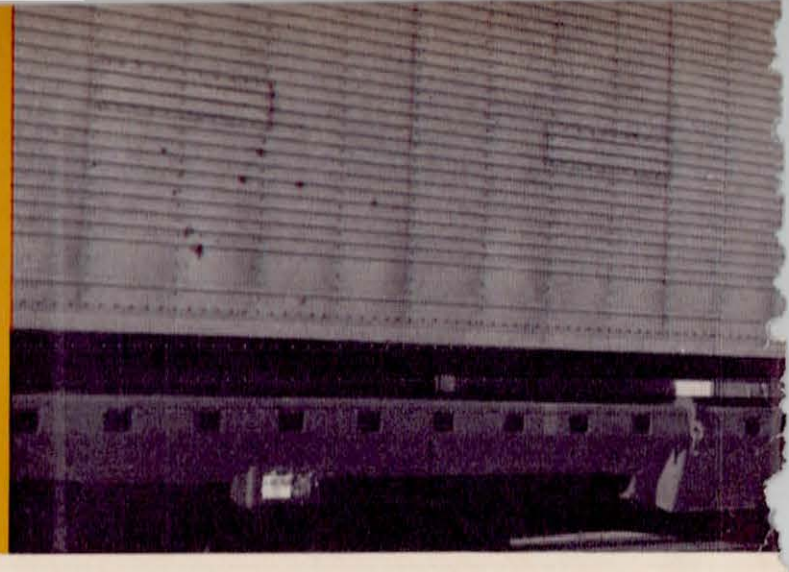
C. P. Greeley, vice president—transportation and distribution, National Distillers & Chemical Corp., New York, points out that his company intervened in Ex Parte 230 "on the general premise that no rules were actually necessary, that leasing is essential, and the 60/40 rule was curtailing the full use of TOFC service."

O. C. Brenner, assistant to general manager, Distribution division, Lever Bros. Co., New York, thinks it is primarily a matter of cost. "Cost between TOFC and over-the-road motor carriage," he says "usually determines whether or not TOFC will be used. If additional regulation raises TOFC cost, a decline [in use of the service] will result, and vice versa."

● **Who benefits?** From Hillside, N.J., D. M. Daly, assistant vice president—traffic, of Bristol-Myers Products

(*Continued on page 94*)

PIGGYBACK



The Trailer Train story

The growth of TOFC, and its present promising outlook, are products of many factors. Important among them is TTX's nation-wide pool of standardized, high-utility, low-cost cars.

Piggyback — virtually non-existent just a little more than 10 years ago— accounted in 1963 for loadings of 797,474 freight cars, or approximately 1,500,000 trailerloads. It produced some $350,000,000 of gross revenue—about 5% of all railroad receipts from freight. The service is available, in one form or another, from 64 railroads.

This year, through May 9, piggyback (TOFC) was 9.4% ahead of the corresponding period last year, with loadings up from 280,541 to 306,863 cars.

● **Many reasons.** There are many reasons for TOFC's near-phenomenal growth.

Most important, undoubtedly, is the realization by the railroads themselves that they had to begin competing with trucks in the latter's own field, and the rates and services which they established to do that.

Other helpful factors have been the flexibility of piggyback; its ability to serve off-rail industries; its relative freedom from loss and damage; the inauguration of Plan III service, and the encouraging guidelines approved by the Interstate Commerce Commission in 1954.

Finally, and by no means least, has been Trailer Train Company—which revamped its own internal organization on May 1 to make itself an even more effective aid to its owners.

Trailer Train (TTX) was incorporated in November 1955 with two railroad member-owners, and three objectives:

1) To foster the growth of piggyback, keep its members acquainted with all developments in that then-new form of transport, and provide them with the best available equipment;

2) To furnish such equipment at the lowest possible cost; and

3) To standardize that equipment and on the basis that two-trailer cars were desirable.

How much such an organization was needed, and how successfully Trailer Train has accomplished its mission, is indicated by the facts that today:

● TTX member-owners number 40 railroads, operating 90% of the country's Class I mileage, and one freight forwarder.

● Its assets total approximately $233,000,000.

● It owns nearly 18,000 ultra-modern railroad cars, all with roller-bearings and high-speed cushioned ride-control trucks. The piggyback cars are used by members and others at an average cost to them of about 3.7 cents per mile, which is 15% below the AAR mileage rate for less expensive bunkerless refrigerator cars. Trailer Train cars produce, for the using railroads, an annual gross revenue estimated at $33,000, some six times the $5,000 earned each year by the average box car.

Somewhat more than 10,000 of these cars handle TOFC traffic. About 6,500 carry finished automobiles in racks applied by the railroads. The rest of the cars are in general or container service.

A look at the future

By any yardstick, TOFC has become big business, and done it in a remarkably short time.

But what does the future hold for it?

Ten years or so ago, it was rather freely predicted in some quarters that trailers on flat cars would eventually replace all box car traffic. That now seems unlikely to occur within the foreseeable future.

More conservatively, however, James P. Newell, president of Trailer Train, believes that "within the next 10 to 12 years piggyback will be three to four times what it was in 1963. In 1975 it may account for about 50% of traffic now moving in box cars."

"Piggyback," Mr. Newell says, "has injected a new growth element into the

railroad traffic pattern, and with it a tremendous boost to morale."

His prediction was made before publication by the Interstate Commerce Commission of new guide lines (RA, April 13, p. 12), in Ex Parte 230. In that proceeding, the Commission frankly said that its new rules were prescribed with the "purpose and hope" of encouraging the growth of TOFC.

Shippers responding to this month's Traffic Poll (p. 43) feel (with some reservations) that the objective will be realized. Here, for example, is what J. Robert Morton, general traffic manager, Combustion Engineering, Inc., Windsor, Conn., wrote in reply to the Poll:

"Manufactured and miscellaneous freight is the area where railroad tonnage has fallen most. By use of TOFC, the rails can reassert their position as the most efficient form of transportation. With the rules prescribed in Ex Parte 230, with intelligent management planning, and cohesive action, railroads can and will regain this competitive traffic."

"Participation in rail piggyback is being encouraged by improved service as well as the economies effected," concurs C. J. Ratzel, GTM, Worthington Air Conditioner Co., East Orange, N. J.

By every yardstick, then, it seems safe to say that piggyback will continue to grow for at least the next decade.

• **Other trends.** Elsewhere in the TOFC field, trends are developing that promise to keep the business climbing:

Westerners think '64 may be the year for the big breakthrough in piggyback shipment of perishables from the

"Some method must be developed for either loading or unloading containers or trailers in less than two minutes each —and this on a sustained basis."

More and more railroads (like the L&N, above) are creating or refining TOFC equipment-control programs.

More and more railroads (like the PRR, above) are already operating solid trainloads of TOFC traffic.

Even more such trains, devoted exclusively to piggyback, will have to be provided if traffic is to grow.

West Coast—a breakthrough which could touch off major changes in marketing patterns for perishables. They're also bullish about TOFC's chances for recapturing large slices of meat traffic.

Business is developing so rapidly in some areas, in fact, that piggyback traffic men are convinced shippers are adapting their own operation to a piggyback-oriented operation — and then, not beforehand, telling the railroads of their plans (the old "I need four trailers yesterday" story).

In some areas—notably Chicago—railroads are finding shippers proposing the handling of pick-up and delivery of trailers by a single local cartage company—at extremely attractive rates. The conclusion: Cartagemen see piggyback as a highly attractive melon—and are determined to get a slice, by offering irresistible rates and getting shippers' backing for their efforts.

More and more, railroads are finding a need for solid piggyback trains. C&EI, flushed with the success of its Chicago-Southeast trains operated with L&N and Atlantic Coast Line, put on a solid Chicago-St. Louis TOFC train May 19.

Wabash, at about the same time, announced inauguration of a piggyback special over the same route on a schedule that comes close to matching that of the "Blue Bird" streamliner.

It would seem, at this point, that carrier piggyback-boosting efforts over the rest of the year at least will be concentrated in two directions—toward refinement of marketing and sales efforts and toward service improvements designed to squeeze even more utilization out of equipment that already runs and runs and runs some more.

● **Pitfalls on the path.** The path to TOFC growth, however, is not without its possible pitfalls. Some of these were charted by Mr. Newell when he spoke to the Southeast Transportation Conference at Atlanta March 13:

"One very important item for future consideration, in expansion of both trailer and container piggybacking, is the design of railroad terminals and the methods used for transferring trailers and containers to and from railroad cars.

"There definitely must be an improvement over the initial and conventional circus-type loading, using a ramp at the end of a string of flat cars. The present method of overhead crane and fork-lift truck unloading will not continue to be satisfactory. Nothing can be gained by rushing piggyback shipments over the railroad between terminals only to have them delayed by the unloading operation. A method must be developed for either loading or unloading containers or trailers in

How railroads are selling TOFC

One of the fascinating aspects of piggyback has been the development of sales organizations and techniques —and the different approaches major TOFC roads have taken. Some roads have piggyback specialists. Some sell TOFC with their regular sales force. Some have placed TOFC responsibility at the highest executive level, or close to it. The only common denominator, apparently, is success.

● **Specialist approach.** Pennsylvania and Louisville & Nashville are two roads which have taken the specialist route.

PRR has its special Truc-Train department, reporting to the operating and sales vice presidents. Under the manager—Truc-Train sales are two assistant managers, one handling Plans I and V, the other working with Plans II, III and IV.

In the field, Pennsylvania has 12 sales representatives working piggyback business exclusively and reporting to the system office. Major market areas are covered—Long Island, Manhattan, northern New Jersey, the Trenton, N.J., area, Philadelphia and eastern Pennsylvania (two men), Baltimore, Cincinnati, Louisville, St. Louis and Chicago (also two men).

Regional and district sales forces also work the TOFC beat—in theory, it's the Truc-Train specialists' job to develop new business, which can then be turned over to regular freight salesmen. Why did PRR set up this way? Because management figured that Truc-Train, as a wholly new concept, then needed a type of development best handled under central, rather than diffused, control.

L&N works its sales effort in similar fashion, with 11 district TOFC representatives—two off-line in Chicago and Orlando, Fla., and nine on-line in Louisville, Cincinnati, St. Louis, Atlanta, Memphis, New Orleans, Chattanooga, Nashville and Birmingham.

L&N's reasoning (the change to a specialist-oriented operation was made about two years ago) parallels PRR's: "We needed specialists to exploit piggyback to the fullest. The operation has been very successful."

Neither PRR nor L&N figures that TOFC will always be handled this way. Both roads indicate that the special organizations will likely be absorbed, eventually, into the regular freight sales organization. But both also tend to agree that "for the time being, it seems best this way."

● **A salesman is a salesman.** An opposite approach is being taken by roads such as Santa Fe—where a salesman is a salesman and handles piggyback as well as what might be called conventional carload business.

Santa Fe has set up a form of specialty department for TOFC—but the aims of its staff are to oversee generally piggyback service system-wide and nation-wide, to keep abreast of TOFC developments in all areas and to make sure all AT&SF salesmen are kept up-to-date on everything that's new in the field and on everything in service and rates that Santa Fe offers.

Like the roads that think specialization is best, Santa Fe regards its approach as best. Why? "A salesman should be a complete salesman. This way we avoid what you might call a 'conflict of interest' situation. And we avoid cases where a salesman goes in to sell box-car business, the shipper asks about piggyback and the salesman has to call on a special salesman to give the shipper the answers he wants."

Regardless of the approach, TOFC sales succeed. PRR and L&N both checked in with good gains in 1963 and figure on '64 being even better. Santa Fe, posting a 39% increase in '63, showed a further gain of close to 20% for first-quarter 1964.

● **Break with tradition.** Even in the personnel area—a knotty one for more than a few carriers—improvement is the order of the day. Railroad after railroad has, in the past, noted certain problems in orienting tradition-minded salesmen to piggyback's potential.

Some say their older, more experienced men tend to shy away from a complete attachment to TOFC, while younger salesmen approach it enthusiastically. Others lay the problem to piggyback's newness, to a salesman's hesitance to sell wholeheartedly a service about which he may not know all the answers to a shipper's questions. Still others think the hesitancy—particularly with regard to Plan V selling —may stem from a salesman's reluctance to work in cooperation with the motor-carrier industry when he has been taught for years to sell against it.

In any event, most roads today see the problem diminishing. One indication: At sales meetings, reports a western-line piggyback manager, "the bulk of the questions asked—be it on schedules or rates or equipment—involve piggyback. The interest is building, and building fast."

Helping, undoubtedly, to build that interest are two major factors: (1) the continuing upward curve of TOFC loadings; and (2) the strong suspicion that more high-rated traffic and longer hauls are causing TOFC revenues to increase at an even faster pace.

less than two minutes each—and this on a sustained basis.

"Fast loading and unloading not only presents a great challenge to the transportation industry. It is also related to the size, and therefore the cost, and location of terminals. Present experience on some of our member lines indicates that at a major terminal they must be able to park on the ground twice the number of trailers that are dispatched in a 24-hour period.

"Thus, unless unloading can be speeded up and trailers moved through the terminals more promptly, the resultant expansion of piggyback terminals could be very costly and perhaps impossible to accomplish in built-up areas. I foresee a gradual movement of these terminals to the edge of our metropolitan areas. They will probably have to be separated into individual units to avoid parking problems and the resultant confusion that would occur if the terminal was operated as one unit.

"Railroads are going to have to provide more specialized trains devoted exclusively to handling piggyback traffic [as many now do] or at least build their service and schedules around piggyback, with possible fillout of other freight, rather than the reverse, which obtains in many cases at present.

"One word of caution. I think the expansion of piggyback terminals can be overdone. Too many terminals can result in costly train service, excessive train switching, and a resultant increase in loss and damage. It will not produce the best service and most efficient use of equipment and manpower."

• **New auto traffic.** Future development of piggyback's offshoot—the carriage of new automobiles on rack-equipped flat cars—may be a little easier to estimate.

It is calculated that only about 60% of all new auto traffic is susceptible to rail movement, by reason of distance or other factors. Railroads are handling about half of that volume now.

More specifically, Trailer Train officers think the company's fleet of rack-equipped auto cars will top off at somewhere in the neighborhood of 8,500 units—a potential increase of roughly one-third above the 6,373 TTX cars in operation early this month.

The two estimates seem not entirely compatible if figures alone are considered. But they agree in indicating that new-auto traffic is probably approaching a plateau. Further developments, favorable or unfavorable, in technology, in rates or in service could alter the situation. Barring such developments, however, automobile traffic appears likely to level off at a fairly stable percentage of auto production.

• **Containerization.** Predicting the future of containerization is much more difficult.

Containers of various sizes, up to and including demountable highway van bodies as long as 40 feet, have obvious advantages when compared to regular semi-trailers. They are less costly. They can be used for storage or warehousing. Their movement, particularly by rail or water, eliminates the space-consuming weight of wheels and axles. Yet they can also be mounted on a truck chassis for highway handling. These and other advantages show up especially when shipments have to be made partly by land and partly by sea.

As a result, more than 60 water carriers now operating into New York alone are using containers to some degree. Container service from West Coast ports to Alaska and Hawaii also is highly developed.

In many cases, containers also move inland, which means that some rail carriage may be possible. Consequently, port-serving railroads like the New York Central (with its Flexi-Vans), the Baltimore & Ohio, the Southern, the Missouri Pacific and the Southern Pacific have done a lot to promote container traffic. So have some inland carriers, like the Burlington.

Yet containers are still handled only by a limited number of railroads, and represent only a small percentage of reported piggyback loadings.

The simple fact is that movement on rail cars of wheeled semi-trailers came into the field first, and still represents a reasonably easy and satisfactory method of operation. It is, at least, easy enough and good enough so that, except in specific situations, there has been no great pressure to solve the problems of handling containers with equal ease and efficiency. "There has been lots of talk," says one informed railroad man, "about how to do that—but very little action."

The primary problem in expanding use of containers is the standardization of tie-down and lifting devices, and the development of more practical and economical means of transferring them between flat cars, highway bogies or chassis and ships.

If these problems can be satisfactorily solved, then use of containers might expand rapidly—particularly in assigned services and for specialized shipments.

Trailer Train, at least, intends to be ready for that day. It expects to have designs this year for an advanced type of car capable of carrying either trailers or containers of varying sizes, against the time when containers, like trailers, may be moved in solid trains.

TRAILER TRAIN STORY

Why TTX cars make new high mileages

Company policies are directed toward maximum use of its big TOFC fleet — and getting it.

"Everything we do is an attempt to promote utilization of cars."

That's how J. E. Wightman, Jr., vice president and general manager of Trailer Train Company, sums up policies which have enabled TTX to hang up hitherto unheard records of freight car usage.

These policies are paying off. In 1963, Trailer Train cars averaged 170.9 miles per day—nearly three and one-half times the 49.1 miles per day recorded for all freight cars during the first nine months of that year. Some TTX cars do even better. TTX 85-foot and longer piggyback flats ran 182.7 miles per day throughout 1963. In January 1964, when the company-wide average was 167.1 miles per car per day, its automobile rack cars were making 208.3 miles.

Behind achievement of these records lie four major factors, each of which ties in with and supports the others. Those factors are:

1) Wide railroad membership;

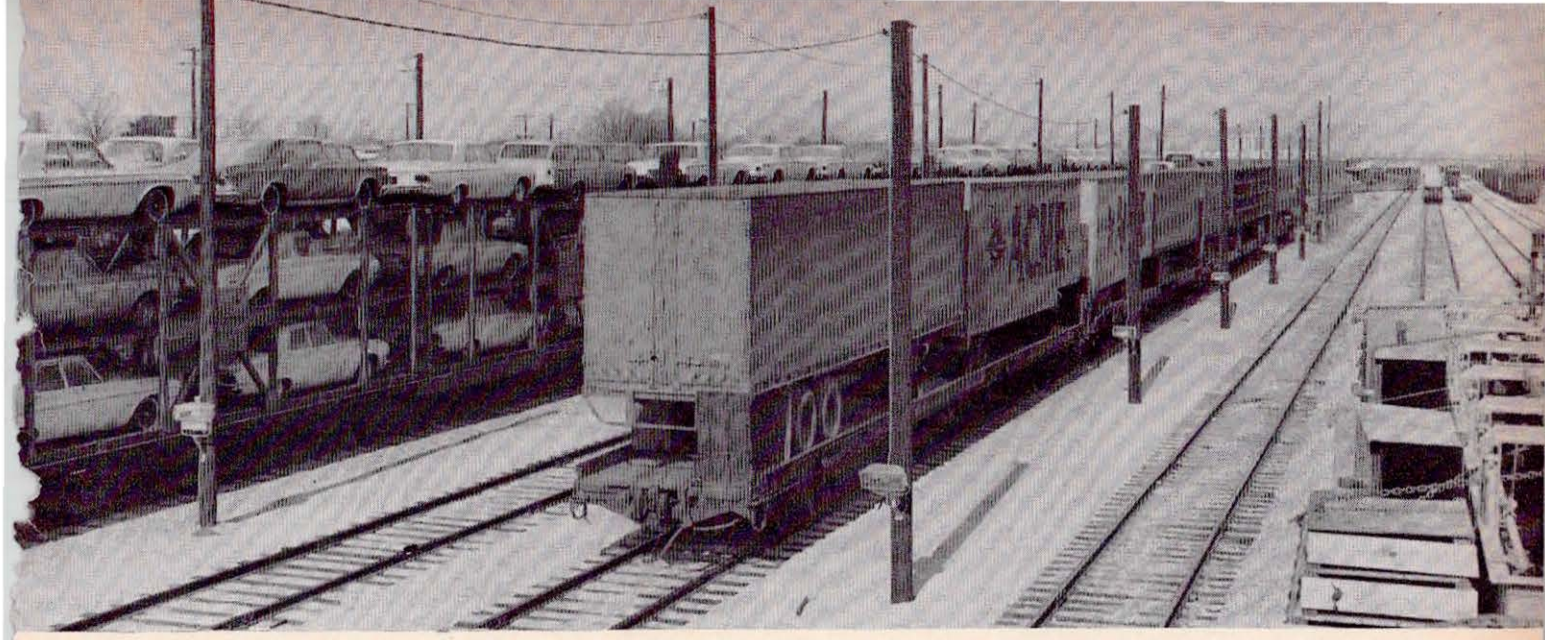
2) Rapid transfer of cars, when necessary, between members;

3) Close and constant surveillance of car surpluses and shortages; and

4) Standardization of equipment.

• **Wide membership.** Trailer Train's present membership numbers 40 Class I railroads, and one freight forwarder. The railroads, collectively, operate 90% of the country's total Class I rail mileage.

The "members" are also the owners of Trailer Train. Each owns an equal number of shares of the company's stock. Each has a representative on its board of directors. Each of them, in consequence, has a vested interest in cooperating with TTX management to



"Expansion of piggyback terminals can be overdone." Smaller separated units may be one answer.

carry out policies established to achieve high utilization of the cars of which they are part owner.

To that end, individual members make daily junction reports to TTX's Philadelphia headquarters on all cars interchanged, just as they make such reports to owners of private freight cars. They account for car use on the same monthly basis as they account for use of private cars. They submit estimates of their probable needs for cars two quarters in advance. And they keep Philadelphia advised "as often as necessary — sometimes almost hourly" of their surplus or shortage situation.

The daily and monthly reports are coordinated by TTX by use of IBM computers. Those reports include mileage figures on all cars, whether in use or idle, and whether on straight per diem or per diem-plus-mileage rental.

A member railroad may interchange a TTX car with any other railroad. If, however, it delivers such a car to a carrier which is not a Trailer Train member, the delivering carrier remains responsible for the car and for payment of charges on it until it is returned to Trailer Train or to a member railroad. Thus, use of cars is not limited to member companies. They can go wherever they may be needed.

• **Car transfers.** Information from member railroads provides the basis on which TTX headquarters personnel makes the most effective possible distribution of cars, transferring them as necessary from one railroad to another.

No member, for example, is expected to keep a car idle for more than five days. At the end of that time, the car can be turned back to Trailer Train, which has the option of transferring it to another carrier or of leaving it with the first railroad. That railroad is then relieved of all charges until it puts the car back into service. Actually, Trailer Train may, and usually will, accept return of a car in less than five days, if a railroad can see no need for it within that time. But TTX is not required to take back idle cars until the five days have elapsed.

Given the right conditions, TTX officers say it is possible for them to transfer cars from West Coast to the East, or vice versa, overnight. Such a transfer does not, obviously, involve a physical move, but a bookkeeping shift from, for example, the Western Pacific to the Rio Grande to the Burlington to the Pennsylvania.

The only exceptions to the free transfer rule are cars assigned to TTX's one forwarder member, the United States Freight Company. These cars, desig-

What car is that?

Trailer Train has emphasized, and achieved, a high degree of equipment standardization. But, though its cars themselves are highly standardized, they may be used for different purposes or equipped with different above-deck devices. To simplify reporting and identification, the following initials were adopted early this year:

"TTX" . . . . . Used for trailer service only.

"ATTX" . . . . General-purpose car with tie-down anchor bars but without trailer hitch.

"BTTX" . . . . Equipped with bi-level auto rack.

"CTTX" . . . . Equipped for container transport, but also able to carry trailers.

"ETTX" . . . . Equipped with elevated tri-level auto rack.

"GTTX" . . . . General American G85 car for trailer service only.

"KTTX" . . . . Equipped with hinged-end tri-level auto rack.

"LTTX" . . . . Low-deck car equipped for trailer service.

"RTTX" . . . . Equipped with fixed tri-level auto rack.

"STTX" . . . . Leased to shippers.

Cars numbered in the 900,000 series have hydraulic draft gear.

nated STTX, are used exclusively in Plan IV piggback operations on a captive basis. They are not pooled, and railroads neither use nor pay for them.

• **Surpluses and shortages.** TTX's wide membership, plus its ability to transfer cars quickly from one member to another, means that it can keep both surpluses and shortages of equipment to a minimum.

But "surpluses and shortages," says Mr. Wightman, "have to be watched closely."

They are. The watching is done through the frequent reports received from member railroads by telephone or telegraph, and through TTX's own weekly railroad-by-railroad analysis of the surplus-shortage situation.

Up to now, because of piggyback's rapid and continuing growth, surpluses have been neither widespread nor long lasting. If they occur at all, it is usually on a local basis and for a limited period. The ability to transfer cars quickly from one member road to another means that such surpluses as do show up can be used to relieve shortages elsewhere. Any remaining shortages can often be eliminated or reduced by calling on builders to supply new cars against purchases previously authorized by TTX directors and already on the car builders' "shelves."

As TOFC operations and trailer interchange continue to expand, there may be, TTX officers point out, some possibility of what they term "massive imbalance" in car supply. As a hypothetical case, such imbalance might arise from the holding for return loads of too many cars moved north with southern fruits and vegetables, leaving originating southern carriers with too few cars to handle available traffic. But so far, such major imbalances have been only spasmodic—and Trailer Train officers hope to keep them no worse than that.

• **Standardization.** Fourth factor in Trailer Train's high car utilization—and the one that simplifies all the others—is the company's heavy emphasis on standardization of equipment. Such standardization and the ability to get and move cars quickly "have contributed more to the growth of TOFC than anything else except railroad rates and service," says TTX President J. P. Newell.

The extent to which such standardization has been carried is shown by the tabulation (facing page) of Trailer Train's car fleet as of May 4. On that date, 16,529, or 93.7%, of all TTX cars were 85 feet or more in length. Of its 10,938 trailer/container-carrying cars (i.e., those not for general service and not equipped with auto racks), 10,146, or 92.8% were 85 feet or more long, and fitted with hitches for trailers.

The results have been beneficial to Trailer Train itself, to all railroads using its cars, and to car builders.

For TTX itself, it makes car distribution easier; helps to avoid surpluses or shortages. Since, with rare exceptions, any car can be sent anywhere, there is no need to hunt for specific types of cars, or to keep cars standing idle because they won't suit the needs of traffic.

For the railroads, it means acquired familiarity with what amounts to a single car type with standard accessories—not so important, perhaps, in actual movement, but highly helpful in loading and unloading.

For the builders, as explained in more detail below, it means virtual assembly line production and a leveling out of production patterns.

TTX fleet

When Trailer Train began operations, on March 17, 1956, piggyback was barely out of its cradle. Each railroad offering the service was supplying its own cars. Most of them were conventional flats, limited to carrying a single trailer held in place by a weird assortment of chains, cables, blocks, ratchets and turnbuckles. Almost anything, in fact, was used that was calculated to keep the trailer more or less securely on the car and out of the cornfields.

So long as most piggybacking was a single-line operation, this variety of equipment may not have mattered too much. But as interchange developed, so did the importance of standardization. And somewhat simultaneously, economics dictated the need for carrying more than one trailer per car.

The organization of Trailer Train Company went a long way to solve both problems.

• **Growth.** In the little more than eight years since the company came into being, its car fleet has grown approximately 33 times, from 530 cars in 1956 to 17,640 now in service or authorized for purchase. Details of the year-to-year increase, by car types, are shown in the table on page 54.

So far as the cars themselves are concerned, the auto rack units are identical with the regular standard piggyback hitch cars. They differ only in that in lieu of hitches they carry automobile racks which are attached by the using railroads—not by Trailer Train. This means that such cars can be reconverted to straight TOFC service if they should be needed there. Auto racks currently in use are manufactured principally by the Dana Corporation, Toledo, Ohio; the Darby Corporation, Kansas City, Kan.; the Paragon Bridge & Steel Co., Novi, Mich., and Whitehead & Kales Co., Detroit.

• **Authorizations and purchases.** To guide the company in its car purchases, all Trailer Train members regularly submit their estimated car requirements for two quarters in advance. The combined estimates are presented to company directors at each of their bimonthly meetings as a basis for authorization to buy new cars.

Actual orders are then placed with car builders as need arises, up to the limit of the authorization. If, for example, several weekly surplus-shortage reports show shortages which cannot be met out of available surpluses, new cars are obtained from builders.

• **Construction.** Under traditional railroad buying methods, such cars would have to be built. Their delivery would probably be matter of months—during which the shortages would continue, shippers would fume, and traffic would probably take to the highways.

Trailer Train's emphasis on standardization avoids that. Because of it, builders are often able to construct TTX cars during otherwise slack periods and keep them in stock against orders that history indicates are sure to come. They are, of course, under no obligation to do that, but it does work to their own definite advantage by allowing them to even out their shop schedules and production patterns. It helps them, in other words, to eliminate the long-standing feast or famine bugaboo of the car-building industry.

It also helps Trailer Train because, when shortages develop, it can almost literally reach out and pick new cars off the shelf. It is not unusual, Mr. Wightman says, "for cars to be delivered within a week after their purchase."

For both those reasons, TTX works in close coordination with the builders, and keeps them advised of its probable requirements. For that reason, too, it purposely bases its car specifications on performance rather than on details of design, and keeps those specifications broad enough to allow for minor design variation between builders.

Its principal builders, at present, are

General American Transportation Corporation for G85 cars; and, for other cars, American Car & Foundry Division of ACF Industries, Bethlehem Steel Company and Pullman-Standard Division of Pullman, Inc.

• **Use.** Once cars are in service, the railroads using them reimburse Trailer Train on either a per diem-plus-mileage basis, or on straight per diem.

Originally, all rates were on the per diem-mileage basis, with the mileage charge decreasing as the car's daily mileage increased. This was predicated on the theory that the per diem payment would carry the car, while the mileage charge would permit fair proration of its maintenance costs.

The original charges—all now reduced by 10%—were:

For cars under 70 feet in length—$2.40 per day, plus 1.8 cents per mile for 80 daily miles or less down to 0.8 cents per mile for 300 or more miles per day.

For cars from 70 to 80 feet in length—$3.60 per day, plus mileage grading downward from 3 cents per mile for 80 miles or less to 1.34 cents per mile for 300 or more miles per day.

For cars more than 80 feet in length—$4.00 per day, plus 3.3 cents per mile for 80 daily miles or less down to 1.47 cents per mile for more than 300 miles per day.

This basis has been generally held on straight piggyback cars—except that U.S. Freight pays a straight per diem of $7.65 ($8.50 less 10%) on cars assigned to it.

The development of auto rack cars imposed a new problem. Since these cars are in captive service they have been put on a flat per diem rate. That rate, however, is higher than the per diem on TOFC cars because it includes provision for maintenance.

The general principle, in short, is that straight piggyback cars are charged for on a combination per diem-plus-mileage basis. Device cars are charged only per diem, but at a rate which roughly equalizes the two charges levied on TOFC units.

If a TOFC car is not loaded or not moved during any given calendar day, the railroad to which it is assigned can reclaim one-half the per diem which would otherwise be due for that day, and there is, of course, no mileage charge. If the car is not used for five days it may, as explained above, be turned back to Trailer Train for reassignment.

This reclamation privilege does not apply, however, to auto rack or other device cars. The auto cars, incidentally, may have up to two months "down time" each year, during the auto manufacturers' model changeover period. This largely accounts for the fact that their average daily mileage, on an annual basis is lower than that for all TTX cars.

What's ahead?

Trailer Train's car standardization policy does not mean, its officers emphasize, that the company's equipment program is standing still.

Not only is it continuing experiments with new accessories, but it is actively exploring development of new types of cars.

• **Ford flats.** First of these new types are 430 flat cars, 60 feet long, which Trailer Train is buying for assignment to 12 of its member roads (RA, April 6, p. 64). These cars will be equipped by the carriers with special devices for handling auto frames for the Ford Motor Company. The cars themselves, already under construction by ACF, are due to be in service no later than August 15, in time for Ford's 1965 model year. They will be paid for like auto rack cars, on straight per diem.

Eight TTX members are interested in 60-foot flats for movement of farm equipment and commodities that can be handled on bulkheaded flats. In the hope of meeting those needs, the company is currently consulting with builders on the possibility of developing a car which will satisfy both requirements, i.e., include the Brandon four-channel farm equipment tiedown and also have a reinforced underframe for the bulkheads.

Perhaps less certain is a car, to be available in about six months, which will be able to handle trailers or containers interchangeably. "We may not buy any of these right away," Mr. Newell says, "but we want to be ready for any future developments in containerization."

• **New car sizes.** Looking ahead, Trailer Train officers see little likelihood of any near-future increase in length or height of highway trailers. Any appreciable general increase in length within the next 10 to 15 years is, they feel, improbable because of the difficulty of maneuvering trailers of more than 40 feet in cities, the growing use of tandem operation on many major highways and public opposition to longer vehicles. Higher trailers, they believe, are precluded because of clearance problems and the fact that extra height can be alternatively obtained by dropping the trailer floor.

On the other hand, they do anticipate a fairly early general increase in trailer width from the present standard 8 feet to 8½ feet. With that in mind, all TTX cars built since July 1, 1963, have been designed to take vehicles of either width.

Similarly, all cars built from now on, for either TOFC or auto service, will be 89 feet long. These won't take two 45-foot trailers, if such trailers should ever become more generally common than is now the case.

They will handle two 40-foot refrigerator trailers, or one 40-foot and one 45-foot dry-freight van.

But a 95-foot car, capable of handling two 45-foot refrigerator trailers, is under consideration. It will be built, if needed, to display the now familiar TTX markings.

TRAILER TRAIN COMPANY CARS "IN SERVICE" AND "ON ORDER" MAY 4, 1964

SECUREMENT	STANDARD HEIGHT 50′	75′	85′	89′	LOW LEVEL 87′	89′	G85	TOTAL
No Hitch General Purpose	0	319	0	0	0	0	0	319
Hitch	284	508	7926	0	0	510	1224	10452
Hitch & Container Cushion	0	0	442	0	0	44	0	486
Auto Rack, Standard Draft Gear	0	0	1552	415	453	2451	20	4891
Auto Rack, Hydraulic Draft Gear	0	0	0	872	0	620	0	1492
TOTAL	284	827	9920	1287	453	3625	1244	17640

TRAILER TRAIN STORY

Piggyback: A tough laboratory

Big TTX flats are probably becoming the best source of data on performance of mechanical components. No other freight cars operate such great distances at high, sustained speeds.

Even though its 17,000-car fleet has an average age well under four years and includes only a very few units as old as 10 years, Trailer Train is already spending several million dollars annually on car maintenance. While it might seem unusual for such a new fleet, a significant portion of this expenditure is for heavy repair.

From the car pool's founding in 1956, however, TTX officers have known that their big flat cars were going to involve greater maintenance expenditures than would cars of almost any other type. The reason? Mileage. "In 1963 our two-trailer piggyback stanchion cars averaged 187.2 miles per day—the greatest mileage utilization of any class of freight equipment now in general use on the railroads," explains J. P. Newell, TTX president.

"Car maintenance is related to the mileage operated, and our cars make three to four times the national average," says J. E. Wightman, Jr., TTX vice president and general manager. "TTX rentals for piggyback cars combine a per diem charge and a mileage charge—per diem is calculated to cover ownership costs, and the mileage is to pay the maintenance costs."

In addition to the high mileage, there are other factors involved in the heavy maintenance spending. The 85- and 89-foot lengths of most TTX cars and the high average speeds maintained by trains in which many of these cars regularly operate serve to produce forces and wear patterns unlike those ever experienced by more conventional cars.

"Our car length has always been a factor—in design, in building, and in maintenance," explains Mr. Wightman. "When we started to order this long equipment, no one knew what would happen to an 85-foot car in one year, two years, or twenty years. We needed to do a lot of predicting." A vast amount of service experience is now showing that the TTX men involved in preparing car specifications, selecting components, and charting maintenance programs did make remarkably accurate forecasts.

And this service is being carefully compiled with IBM records kept at Philadelphia. Here there is to be a complete history of the repairs and mileage for each TTX car—a handy method for spotting the occasional "bad actors" in the fleet. Similar information is also gathered by classes of cars, by builders, and by car components.

- **Rolling laboratory.** Information should prove valuable not only to TTX, but to the entire railroad industry. "Our mileage is so high and service so severe that we find out much more about cars and components in much less time than anyone else," observes Mr. Wightman. "You might think of the TTX car fleet as a huge rolling laboratory."

Research aimed toward improving equipment, decreasing out-of-service time, and reducing maintenance costs has been pushed aggressively throughout Trailer Train's eight-year existence. And standardization has always been the watchword. Emphasis on standardization is making it possible for TTX to buy today's 89-foot cars for not too much more than was paid for its original 85-foot equipment purchased in 1958. It also permits builders to assemble cars for stock so that Trailer Train can acquire new cars rapidly.

Specifications are broad

Specifications have always been broad enough to allow each of the builders to produce a design which best fits individual fabrication and assembly facilities. This policy has been vital in controlling builders' costs. Simultaneously, the specifications do fix very exactly those features and factors which TTX engineers had determined to be vital in assuring long, uninterrupted, low-cost service.

Trailer Train officers point to the projected 20-year repair cost of under ¾ cents per car mile for their flat car, comparing it with the almost 2 cents per mile for the nation's entire car fleet. The national figure was based on calculations made by W. M. Keller, AAR vice president-research. "Even though our daily per-car repair cost will average $1.27 as compared with the over-all $0.74 calculated by the AAR, our high-mileage produces a per-mile cost just over one-third the national average," says Mr. Wightman. "And, despite the rugged service and high utilization, we are able to keep 98% of our cars in service constantly."

Keeping these big flat cars rolling steadily is the goal not only of TTX maintenance programs, but of every other facet of the operation. But maintenance planning under A. O. Taylor, chief mechanical officer, seems destined to be increasingly important as the TTX fleet accumulates greater mileage and as changing traffic and operating conditions impose new demands.

- **Running gear.** One of the earliest predictions made about the long TTX cars was that the multiple-wear, heat-treated wheels with which they were being equipped could probably operate approximately 350,000 miles before requiring turning to restore flange and tread profiles. At the same time, in 1958, two other factors—the life and maintenance of roller bearings and truck vertical-ride components—were complete unknowns. Never before had these truck parts been installed on freight equipment where there was a definite prospect that they could be literally worn out in only a few years. While manufacturers promised satisfactory life, they could cite only laboratory-simulated service to back their promises.

Looking over the remainder of the typical piggyback car—really an elongated rolling platform—TTX men could see nothing else which should require repair or servicing in less than a half-million miles. Hopefully, the car structure itself and the components mounted on it would operate considerably more before needing attention.

The running gear was then given first priority. Determining the service lives of wheels, roller bearings, springs, snubbers, pedestals, side frames and bolsters should determine the shopping periods which TTX would regard as preventive maintenance rather than repair. At the same time, any improvements or changes which would allow these components to operate for longer periods would be carefully appraised.

As the first cars approached the 100,000-mile figure, a few were taken out of service for roller-bearing inspection. This same practice was followed at 50,000-mile intervals thereafter until it

Check of roller bearing lateral is part of wheel-set inspection in shop.

Roller assembly will be reapplied for another 350,000 miles of service only if careful check shows no defects.

became obvious that practically all the bearings could operate 350,000 miles.

Is 350,000 miles the tops for the first turning of wheels? This has been the mileage at which TTX cars have been directed to one of the contract shops which does the periodic maintenance work. "About 85% of our wheels are now achieving this," Mr. Wightman pointed out. "Other truck components have proved to be suitable for more service."

TTX mechanical men are now looking for ways to extend wheel life, the car pool's largest single maintenance expense. Lack of lateral in the freight-car truck fitted with roller bearings is rated as a definite factor in flange wear, the reason for 80% of TTX wheel turning. Currently under test are roller-bearing adaptors coated with Teflon which will allow some lateral movement of the entire bearing assembly under the adaptor. Other tests of the effects of increased lateral are now being conducted on trucks where pedestal wear is being allowed to exceed manufacturer's tolerances; with recently introduced trucks having double bolsters between which there is controlled lateral motion; and with cartridge bearings.

• **Research.** Such experiments are an integral part of TTX equipment research. Typically, the company tries a series of solutions and makes sufficient applications to insure reliability of the tests. As part of an effort to maximize tread wear, TTX has planned to test a variety of on-tread and off-tread braking arrangements. Along with changes in tread-wear patterns, it is hoped that a braking system which will minimize shoe replacements can also be chosen. Because some flange-wear patterns have been unexplainable, tests of several truck-mounted brakes are now being conducted. These, it is expected, will show whether body-mounted brake systems produce forces which tend to skew trucks and produce unequal wheel-flange wear.

Mileage is extended

Truck components which require disassembly for inspection—roller bearings, springs, and snubbers—are performing so satisfactorily that TTX is currently raising its mileage repair interval from 350,000 to 400,000 miles. It is anticipated that, eventually, this figure may be raised still more.

While most wear had been anticipated, the long cars have produced a center plate problem unlike that encountered by any of the TTX men in their prior railroad maintenance experience. The truck center plates have been wearing egg-shaped with as much as ⅜ inch of wear developing in a fore-and-aft direction after 350,000 miles of service. This bolster is subjected to almost constant longitudinal and lateral movement while the car is rounding curves, braking and accelerating. In addition to friction and abrasion under load, the center plates receive occasional impacts which could go as high as 700,000 pounds during switching and humping. These impacts are generally under 300,000 pounds.

When Trailer Train encounters such a problem, the first step is to do something which will overcome the immediate trouble, then make a thorough engineering analysis which aims at a long-term solution. In this case, the preventive measure proved so satisfactory that it is now being applied not only to cars undergoing heavy repair, but to all new cars.

A high-carbon manganese-steel wear ring is now being welded in each truck center plate after it is bored to a larger-than-standard diameter. Rol-man steel, produced by Manganese Steel Forge Co., is work-hardened by in-service impacts to develop an extremely hard surface layer which resists abrasion and wear. The base metal beneath the hardened zone remains ductile and does not become brittle.

In some instances, these rings have been in service two years. After approximately 100,000 miles of service, they have shown no appreciable wear. Final results will not be known for at least three more years when TTX me-

chanical men feel they will have conclusive data.

Having overcome the problem with the truck center plate, they are now being confronted with a new one involving the body center plate. Some of these forgings are showing circumferential cracks. Reports of such cracks, coming in from TTX field men and from the contract repair shops, have set off another round of investigations which are not yet completed.

Because it has never been possible to simulate all the forces to which car running gear is subjected in over-the-road service, no accelerated test could take the place of extensive actual operation to detect trouble spots. This has not been the case with carbodies. Before each of the big all-welded designs produced by American Car & Foundry, Bethlehem, General American, and Pullman-Standard has been accepted for production, Trailer Train has required that it be subjected to an extensive series of static and dynamic tests. These serve to prove all the engineering assumptions and assure the integrity of the assembly. Because of these exhaustive tests, according to Mr. Wightman, none of the carbody designs put in service by Trailer Train has ever had a major structural defect.

• **Bodies.** There have been some carbody problems. Typical of these was wear which developed in the hinges on the bridge plates installed at diagonal corners of each car. At first it was thought that raising and lowering the plates at terminals or the weights of tractors and trailers passing over them was damaging the hinges. After considerable checking, the wear was found to be caused by oscillation of the bridge plates in the raised position while the car was moving. This is now being solved by installing a double-acting spring at the hinge as the cars go through heavy repairs. New cars are fitted with them as original equipment.

Trailer hitches are requiring more maintenance than had originally been anticipated. Contract shops are now doing considerable checking of these retractable, shock-absorbing assemblies as the cars are overhauled. It has developed that this ultimately could be a factor fixing the shopping periods.

Soon after the long TTX cars began operating, there were a few failures of center-sill bottom-cover plates, highly stressed members in these all-welded designs. TTX engineers redesigned this component to move the transverse joints from the areas of greatest stress, and there has been no recurrence.

More recently, considerable work has been done to reduce carbody corrosion, primarily on the upper surface of the top deck. As originally built, many of these cars had Diamondette plate strips tack welded over the heavy top-deck plate to serve as runways for tractor and trailer tires. Other cars were built with short, closely spaced transverse wood planks forming these tire runways. After several years, it was discovered that water accumulating under the Diamondette plate was seriously corroding the heavy deck plate.

After thorough investigation, TTX men found a satisfactory abrasive paint coating which could solve this problem by forming a non-skid surface when applied directly to metal. This coating has made possible the removal of Diamondette strips on cars of that type. The contract repair shops are now making this change.

Actually, selection of the abrasive paint was but one phase of a program to choose and apply coatings which would give the cars greater protection. During the days when the heavy shopping intervals were still being determined, some TTX men became concerned about paint life. It had become evident that some of the cars might have to be shopped for painting prior to the time when it would be necessary to inspect and replace their mechanical components. At that time the specifications for finishing of new cars were tightened to require better surface preparation and increased paint thickness. New and rebuilt cars must now be abrasive-blasted prior to painting. This must be followed by coats of prime and enamel paint sufficient to produce a final dried thickness of not less than 3 mils. With this new surface protection, cars can readily operate through present and anticipated shopping intervals.

Does every Trailer Train innovation promise to extend the shopping intervals? Almost every one has. Despite the satisfactory performance of the rubber and rubber-friction draft gears installed on practically all TTX cars, a substantial number have recently been fitted with hydraulic draft gears to give them greater impact-cushioning capacity for automobile rack service. These hydraulic devices are such recent developments that there is insufficient service experience on which to base overhaul forecasts. Manufacturers have indicated that they should perform satisfactorily for periods comparable to established TTX shopping intervals.

But will they? Again, TTX will probably be the first to find out. By putting them on cars that operate more than 65,000 miles annually in high-speed trains, these new gears will get an accelerated life test of the severest type. As is now the case with components such as wheels, roller bearings and center plates, Trailer Train again will be gathering data which ultimately can be of great benefit to all railroads.

TRAILER TRAIN COMPANY
CARS AUTHORIZED AND PURCHASED—1956 to 1964

	STANDARD HEIGHT				LOW LEVEL				
	50′	75′	85′	89′	87′	89′	G85	TOTAL	CUM. TOTAL
1956	0	530	0	0	0	0	0	530	530
1957	286	300	0	0	0	0	0	586	1116
1958	0	0	800	0	0	0	0	800	1916
1959	0	0	2200	0	0	0	0	2200	4116
1960	0	0	1881	0	239	0	50	2170	6286
1961	0	0	1481	0	265	846	80	2672	8958
1962	0	0	2197	0	0	1113	199	3509	12467
1963	0	0	1117	1214	0	1439	715	4485	16952
1964	0	0	284	73	0	184	201	742	17694
TOTAL	286	830	9960	1287	504	3582	1245	17694	
DESTROYED	2	3	40	0	4	4	1	54	54
GRAND TOTAL	284	827	9920	1287	500*	3578	1244	17640	17640@

* Fifty 87-foot cars stretched to 89 feet.
@ Approximately 574 additional cars have been authorized but not purchased.

TRAILER TRAIN STORY

Contract shops do repairs for TTX

Pool now has no plans for its own car-maintenance facilities.

Is it possible to own a large car fleet without owning any car-repair facilities? Trailer Train, with over 17,000 cars, is probably the largest such operator. Its answer is a definite "yes."

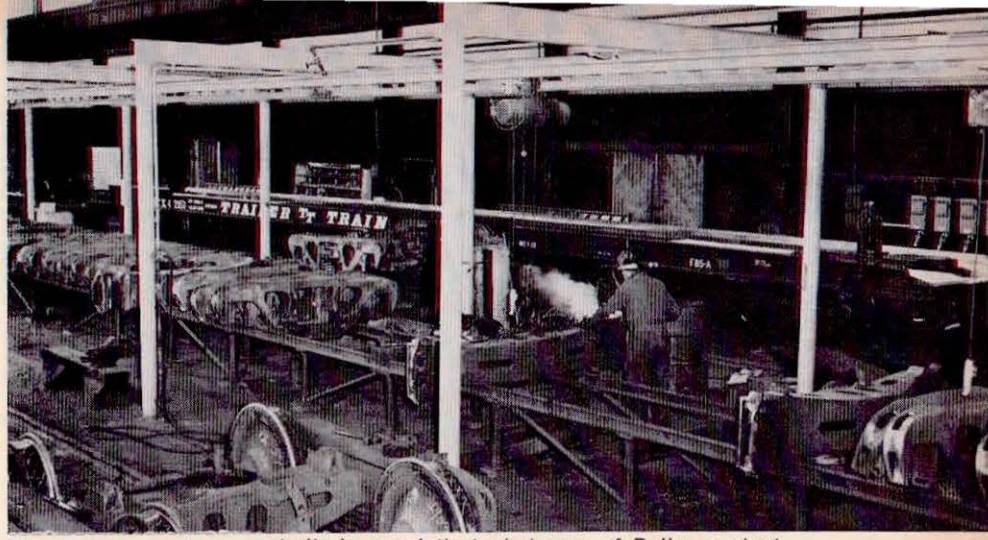
"We have absolutely no investment in car-repair shops and plan none," says J. E. Wightman, Jr., vice president and general manager. Trailer Train car repairs and maintenance have been handled so successfully by its owner-members and contractors that there is no thought at present of having the work done in any other way.

Two of the reasons usually given for owning car-repair facilities—handling of shopping peaks and assuring better control of costs—have not been problems for TTX. Its carefully engineered and tested cars are making possible very methodical maintenance programs. Average per-mile car-repair costs should be about one-third the national average.

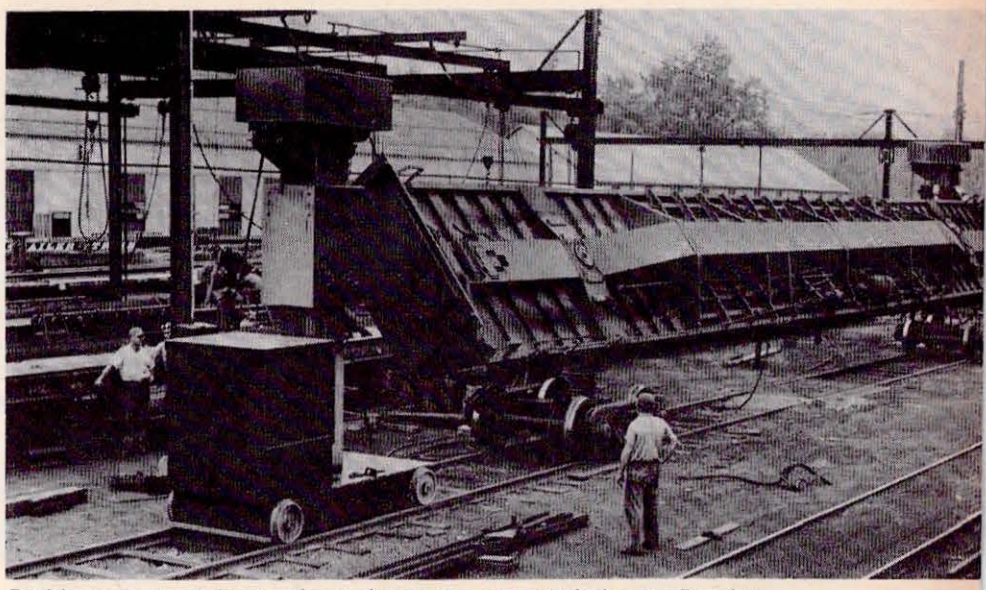
● **Three shops used.** Most programmed maintenance for TTX is, today, handled by the Hammond, Ind., plant of Pullman-Standard and the Kansas City, Mo., plant of ACF's Shippers' Car Line Division. A small amount of the programmed repair and all wrecked cars are put through the Hollidaysburg, Pa., car-repair facility of the Berwind-White Coal Mining Company.

About 3,000 cars have been given light and heavy repairs by these three contract shops over the past few years. During the first four months of 1964, for instance, the heavy-repair total was 379, with Pullman-Standard turning out 259 and Shippers' 104.

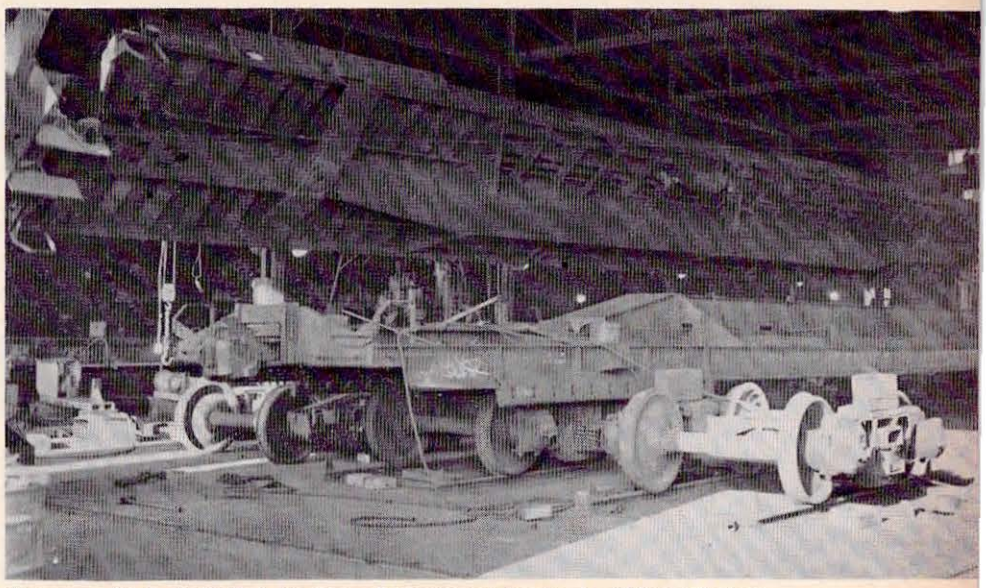
Through its early years when TTX had not yet become a coast-to-coast pool and when all of its cars had relatively low mileage, repairs were handled by railroads on their "rip" tracks. This work was done on regular AAR interchange repair billing. Even then, however, there were the occasional cars which were heavily damaged in derailments.



Truck components are rebuilt in specially tooled area of Pullman plant.



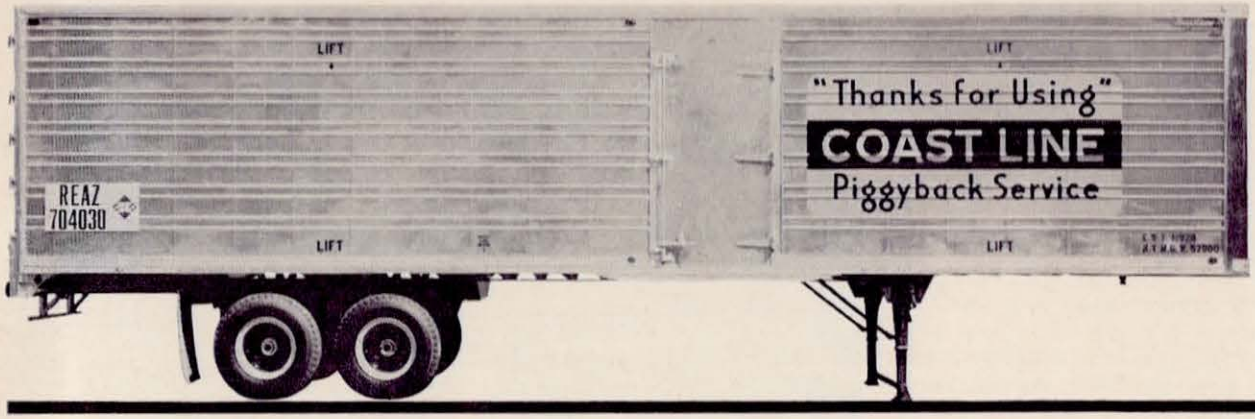
Positioner is used for regular maintenance and rebuilding by Berwind.



Turnover jig is installed on one of single-car tracks in Shippers' shop.

● **Berwind-White.** It was during this time that the TTX management arranged with Berwind-White to rebuild

(*Continued on page 63*)



RAILROAD
No two PIGGYBACK needs are alike, but

More and more, major railroads are taking advantage of Great Dane custom-built trailers to meet specific commodity hauling needs. The special design and construction needed for piggyback trailers has been applied successfully to hundreds of trailers built for use by railroads. Each railroad has different needs. Great Dane piggyback engineering has met these needs for more profits. Insulated produce trailers, dry cargo vans, frozen foods haulers, meat rail trailers, demountable containers, all have been custom-built by Great Dane. The engineering and craftsmanship experience which has gone into trailers for other railroads is available to you to make your piggyback operation more profitable. Take the first step toward getting complete details without obligation now! Write to Great Dane Trailers, Inc., Savannah, Georgia.

all can count on Great Dane Trailers for more profitable piggyback service

Send for the free folder, "Modern Piggyback Transportation Service with Great Dane Trailers."

Great Dane Trailers, Inc.

SAVANNAH, GEORGIA

SH
TWO FULL
CLEAR THRESHOLD

One hand

opens 10′ x 12′9″ door. It's Reynolds Aluminum.

If the doors shown here had been made of steel, this man would be working a lot harder.

Made of strong, lightweight Reynolds Aluminum, each section of the two-leaf door weighs 980 lbs. Total weight 1,960 lbs. If they had been steel, they would weigh 1,620 lbs. per side or over 3,200 lbs. total.

The point being that Reynolds Aluminum saves dead weight, work, and handling labor in rail equipment. It also lets equipment designers do things that would be impractical with steel.

For example, these doors are made by Youngstown Steel Door Company for a new "Hi-Cube" boxcar. Over 800 of these cars are being built by Thrall Car Manufacturing Company and Greenville Steel Car Company. The cars are over 93 feet long—the largest production line boxcars ever built.

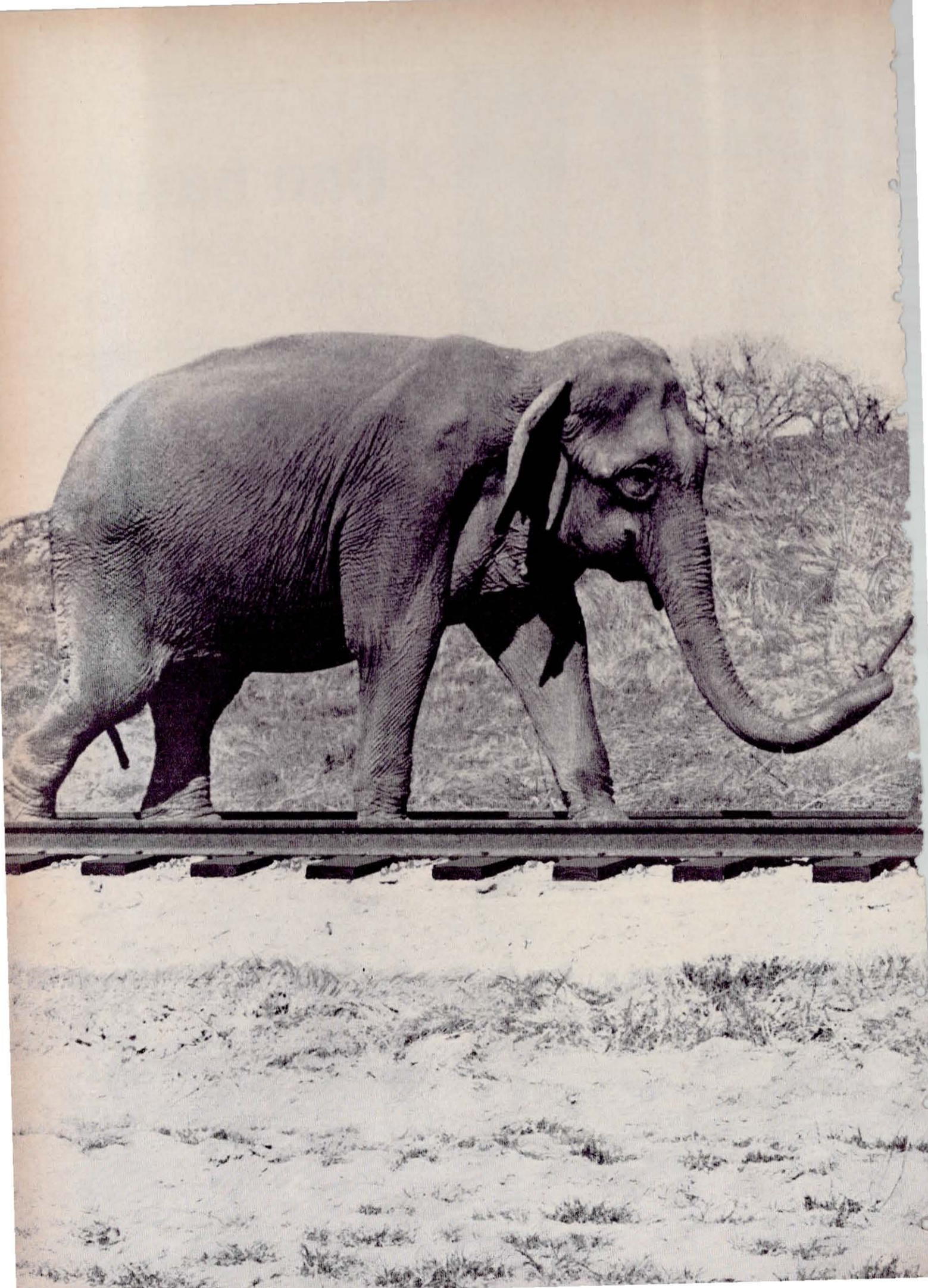
The big doors provide a floor-to-roof opening that permits fast, easy loading and unloading of automotive parts for Ford Motor Company. *Only aluminum can make a door that big that is light enough and strong enough to be practical.*

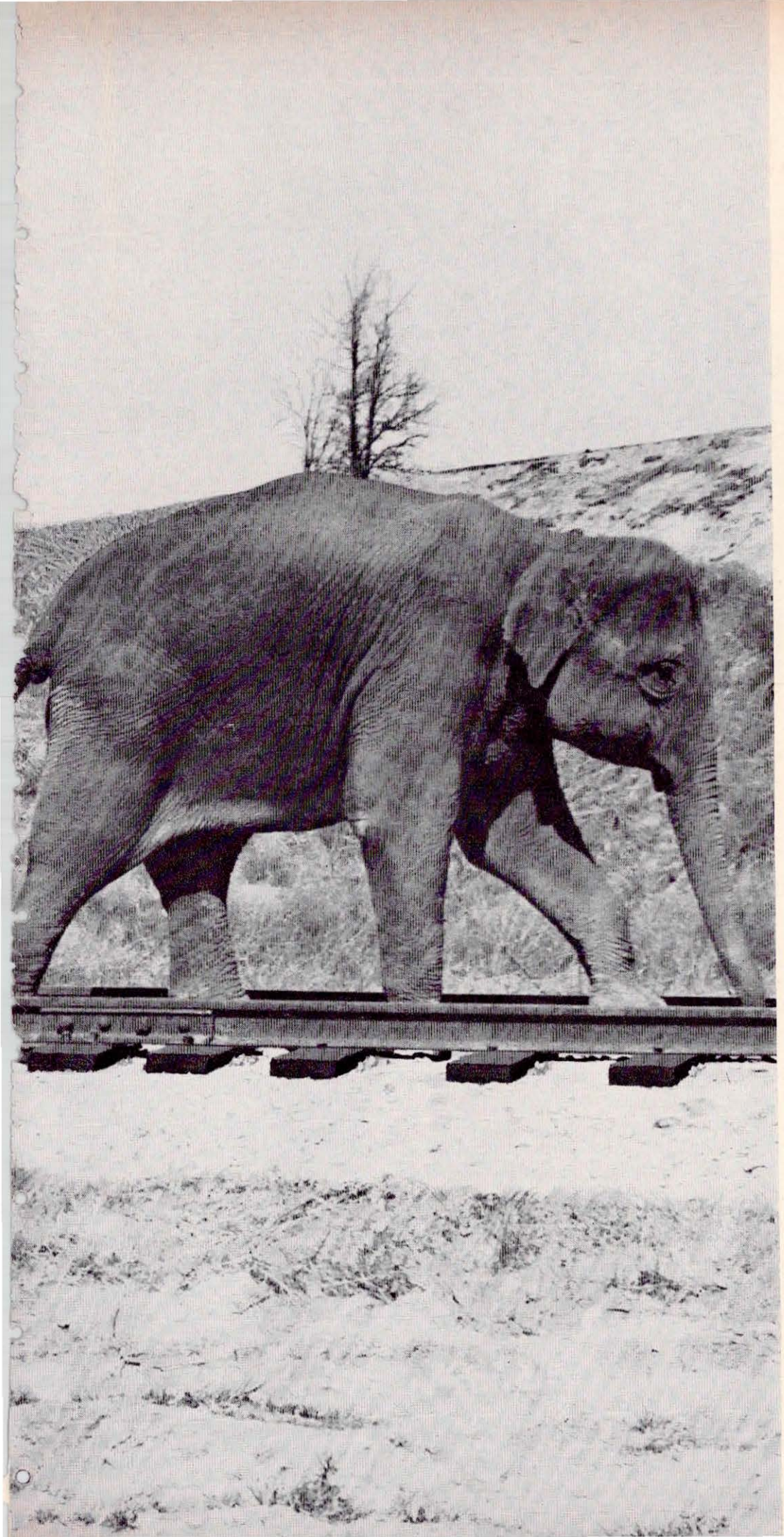
Experience has shown, too, that this tough Reynolds alloy will take all the punishment that daily railroad use gives it . . . and requires less maintenance and service.

If you're considering any railroad or freight equipment, consider the possibility of using equipment made with Reynolds Aluminum. It can save dead weight, reduce upkeep, and stand up under the roughest usage. Contact your local Reynolds office, or write *Reynolds Metals Company, P.O. Box 2346-TM, Richmond, Virginia 23218.*

REYNOLDS
where new ideas take shape in
ALUMINUM

Watch the Richard Boone **Reynolds Aluminum Show,**
Tuesday nights, NBC-TV





no hands

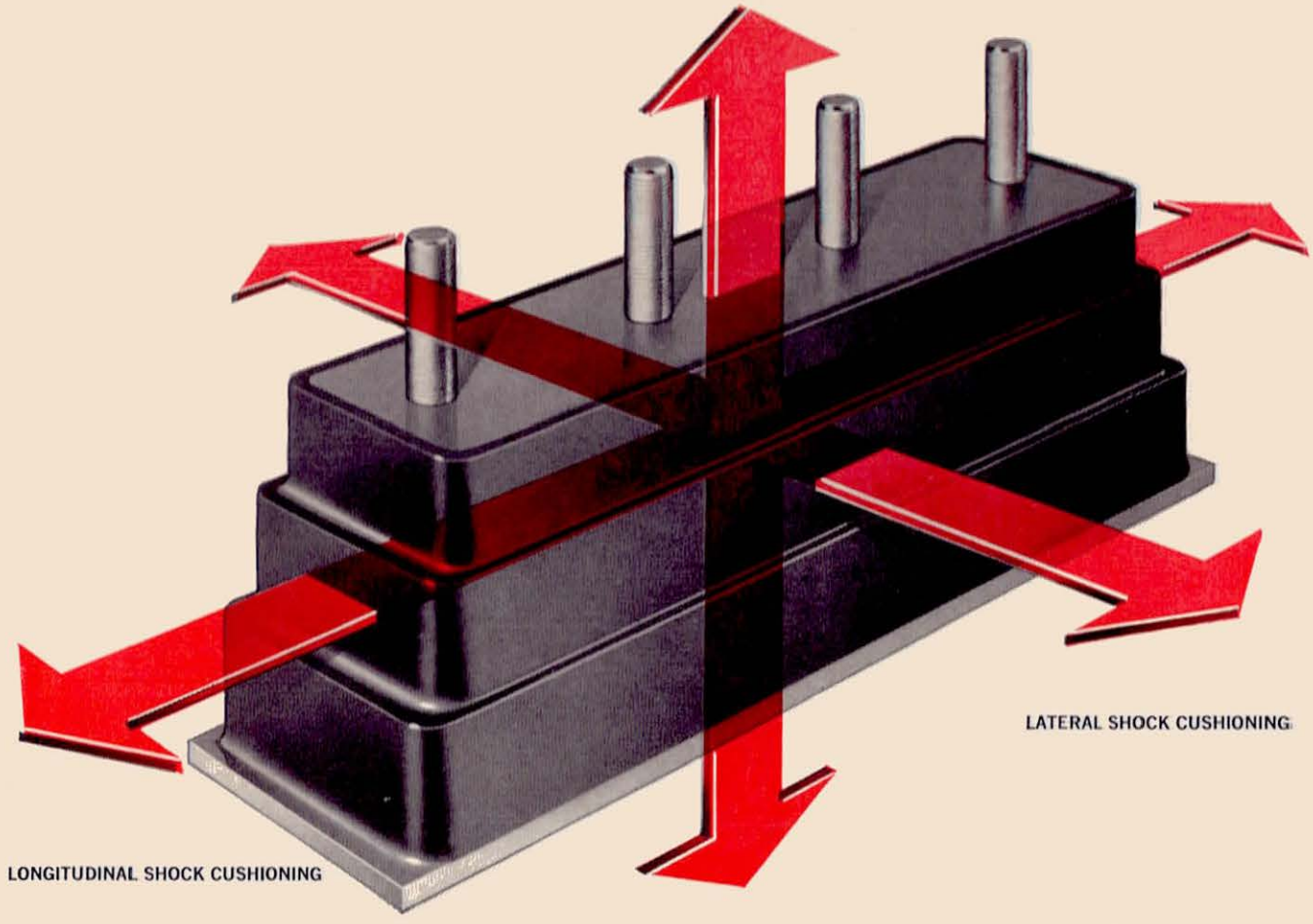
With General American's G-85 piggy-back car, raising and lowering the trailer hitch is a no-hands operation. The tractor does it all. For that kind of a performance, we think the G-85 deserves a hand (even though it wouldn't know what to do with it).

Faster, simpler loading and unloading. Now you know one more reason why railroads are buying more G-85's every day.

FREIGHT CAR DIVISION

GENERAL AMERICAN TRANSPORTATION CORPORATION

135 South La Salle Street · Chicago 90, Illinois
Offices in Principal Cities

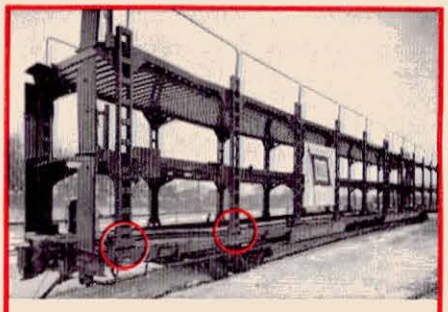


Lord shock "cushions" give 3-way protection

You need more than just impact cushioning to get full protection for lading and car components. It takes the all-direction protection of Lord Dyna-deck shock mountings, made of *rubber with a backbone of steel.*

Proved on auto racks and other car applications, Lord mountings provide: (1) 8-inch fore-and-aft travel to cushion impacts, (2) lateral flexibility to absorb the shock from side sway, and (3) vertical resilience to reduce high-frequency disturbances. Controlled flexibility also accommodates misalignment and frame distortion, protecting auto racks and other superstructures.

Lord mountings give all-weather protection under *all* impact loads. Used alone or in combination with cushioned underframes, they offer today's best all-around protection. Write for details on Lord 3-way shock cushioning. Lord Manufacturing Company, Erie, Pa. Field Engineering Offices in principal cities. In Canada: Railway & Power Engineering Corporation, Ltd.



Auto rack car built by Paragon Bridge & Steel Co. uses Lord mountings for 3-way protection.

The leader in vibration/shock/noise control **LORD®**

Three contract shops maintain the Trailer Train car fleet

(*Continued from page 55*)

the badly damaged cars. The Berwind shop was then maintaining a shrinking fleet of captive coal hopper cars. While all its facilities had been laid out to accommodate 33-foot coal cars, it was soon putting 85-foot piggybackers down its repair tracks. Today, with its hopper fleet completely leased to other operators, Berwind's Hollidaysburg shop has been rebuilt and retooled primarily to rework the huge welded structures which are the carbodies of TTX flat cars. Berwind repair forces have successfully developed and mastered techniques of straightening and restoring camber to the elongated alloy-steel carbodies. New sandblasting and painting facilities and a roller-bearing shop have also been established for these cars.

Actually, most of the work done at Hollidaysburg is of the "defect card" type—repairs for which Berwind-White is reimbursed by railroads on whose lines the cars were damaged. The widely fluctuating shop load involved in repairing heavily damaged cars in minimum time is smoothed out as A. O. Taylor, TTX chief mechanical officer, also directs a varying number of TTX mileage-maintenance cars into the Hollidaysburg shop.

● **Programmed repairs.** Most mileage-maintenance cars, however, go to Hammond or Kansas City. Geography primarily fixed these two locations. By the time Trailer Train cars were approaching the mileages when it had been estimated that they would require wheel and truck work, the car pool had member roads extending from coast to coast. To achieve maximum equipment utilization, always the prime TTX objective, it was essential that the cars be out of service for as little time as possible for mileage maintenance work.

By locating the maintenance facilities doing this work close to major piggyback centers, it becomes possible to work practically all cars in to shop areas under load. It was also important to TTX men that the points involved be served by more than one railroad. Chicago and Kansas City score high both on volume of piggybacking and on number of local member railroads.

From IBM records of individual TTX car mileages in the Philadelphia headquarters Mr. Taylor prepares a quarterly listing of cars with mileages sufficient to justify a visit to one of the maintenance shops. This figure is now 350,000 miles. TTX men expect that it eventually may be raised.

This listing of all cars due for shopping is given to each member road along with its quota of cars which are to be sent to a specified TTX repair shop during the following three months.

The individual cars are assigned neither to a specific railroad nor to a specific shop. On most roads car inspectors and distributors check the TTX listings regularly and, whenever possible, arrange for any available car on line to be loaded to a point near the shop.

There are major differences in the Hammond and Kansas City plant facilities. At Hammond, Pullman-Standard uses a building over 600 feet long in which World War II armament and later track equipment were built. Cars go through the shop on two parallel production tracks along which are 18 work stations. The Shippers' shop at Kansas City was designed to service tank cars. At one side of the shop are four working areas, each with a capacity of one car. Down its center are two assembly tracks which can handle four TTX cars simultaneously.

● **Operations and methods.** While procedures and methods vary slightly, Shippers' and Pullman-Standard do approximately the same job. Both find that truck components are the major repair items and that no changes are needed in the basic structural design of the cars. Both shops have modern roller-bearing reconditioning facilities. At each of the contract shops Trailer Train stations a repair supervisor who appraises incoming cars and specifies the work to be performed. Since Shippers' started repairing TTX cars in June 1961, over 1,000 cars have been processed. Presently, production runs three to four heavy repairs daily. Pullman-Standard has turned out 1,400 cars since it began making repairs in September 1962. Currently, it completes about seven cars daily—four heavy and three light repair cars.

Full-time revenue service

While repair shops have, at times, become concerned about not having any backlog of cars due for repair, this actually reflects the Trailer Train policy of keeping cars in revenue service practically full time. Mr. Wightman proudly points out that 98% of the car fleet was available for revenue service throughout last year.

Another factor in such high availability is the thorough overhauls which Trailer Train schedules and which the contract shops give the cars as they come through. It is planned that a car passing through any of the three contract shops is going out for an additional five to eight years.

The shops regularly install a double-acting spring on bridge plates and put an additional vent valve in the air-brake system. They report that there are very few roller-bearing replacements and that condition of practically all the high-capacity draft gears is so satisfactory that they go back in for an additional service period.

Items replaced with great frequency include wear plates on coupler shanks and in truck bolsters, bearings and rubber sleeves in retractable trailer hitches, and center-plate castings.

In the process of standardizing deck construction to lower maintenance costs, shops are removing the Diamondette plate tire runways on one type of car. The steel-plate decks which are produced by these changes are refinished with a special abrasive paint to produce a non-skid surface. When wood floors are retained, normally about half the planks must be replaced with treated flooring, along with most of the riser boards.

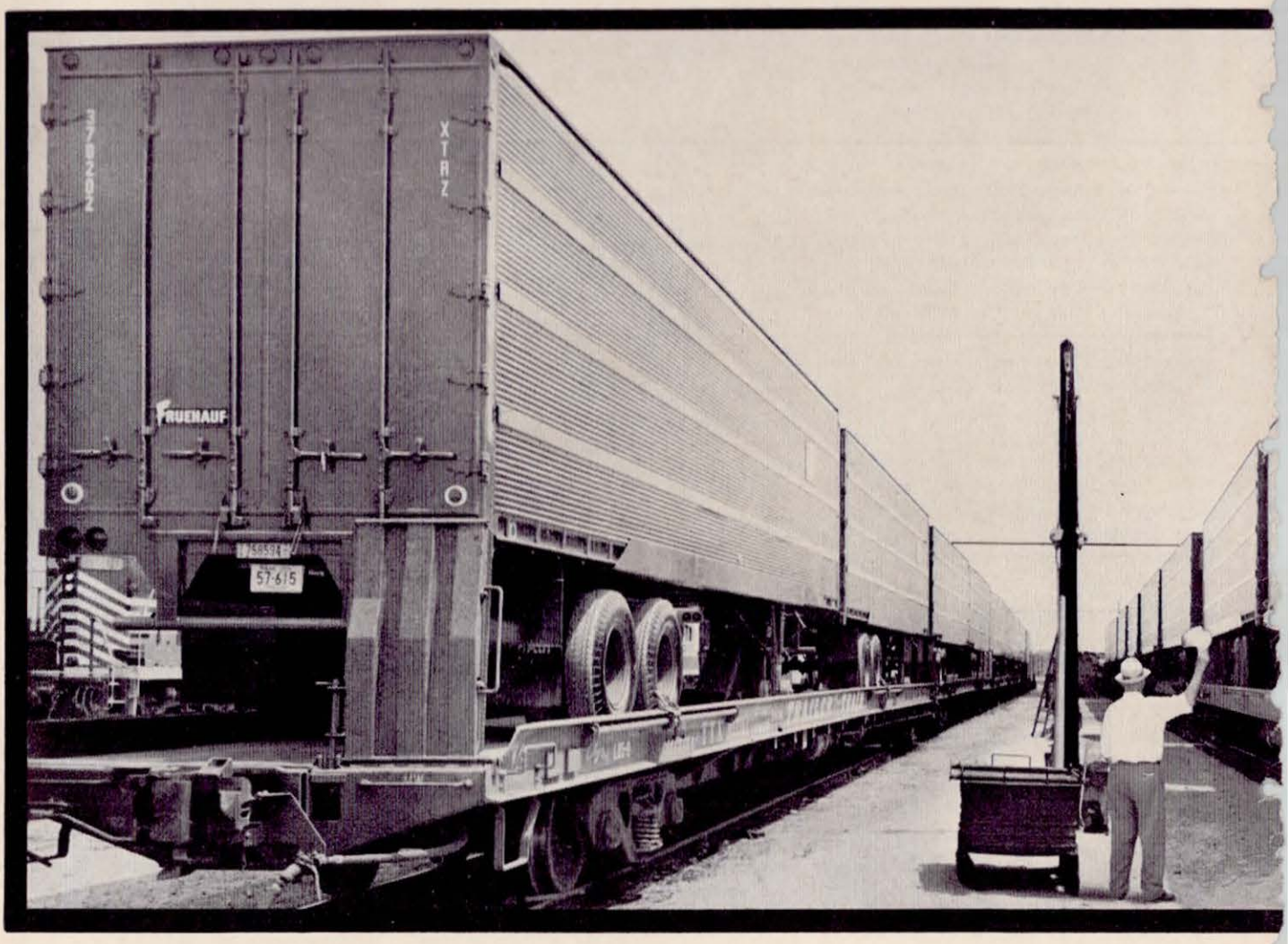
The Type F interlocking coupler, which was adopted as the Trailer Train standard so that these extra-long cars would not jackknife in trains, has been found frequently with broken gathering wings. End sills are sometimes found bent by coupler bypass or cornering. Hand-brake stanchions frequently require straightening. Careful attention is given to any nicks in center sill bottom cover plates. This highly stressed member must have all nicks ground smooth before the car is released from the shop.

All three of the contract shops have installed special turnover jigs to simplify work not only on the critical center-sill cover plate, but on all the underbody equipment of the car. Each of these big machines consists of a pair of heads which clamp to the car ends, elevate the carbody and invert it. After inspection and repair, it is placed back on the trucks.

● **Pullman shop.** Two turnover machines are installed on Pullman-Standard's TTX repair line which, otherwise, is similar to the usual car-repair facility. The shop does include a completely new room for inspecting and reconditioning roller bearings. As a car enters the shop, an hydraulic jack between the rails lifts one end of the car at a time for application of shop trucks. The car moves on this track through several stations to the turnover machines and shot blast. At the first turnover station,

(*Continued on page 96*)

NATION'S RAILROADS FIND HAVE EXTRA DURABILITY



"Several new features built into Fruehauf Trailers, particularly in the front wall and rear end, give these Trailers longer life and certainly cut down on maintenance and repairs," says Mr. C. P. Tomm, President of Xtra, Inc., Boston, Mass.

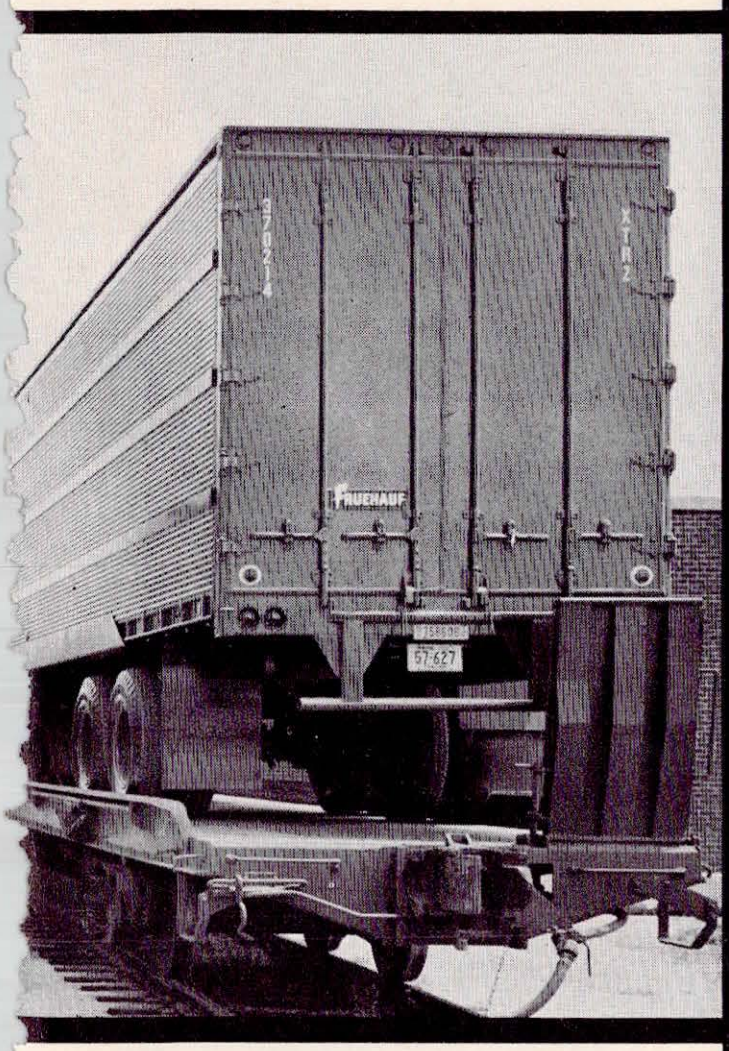
"United States and Canadian railroads offering piggyback service use XTRA Trailer equipment and have found Fruehauf Trailers excellent for piggybacking because of their extra strength and durability. We also like the way Fruehauf's design and engineering staffs cooperate with our research and development department in producing equipment to meet the specialized needs of many of our shippers."

Fruehauf Trailers are built to give longer, lower-cost, more dependable performance in over-the-road or piggyback operation. Because they come in a range of sizes and types unmatched in the Trailer industry, you'll find there's a Fruehauf Trailer that meets your hauling requirements exactly.

Your Fruehauf representative will give you the complete Fruehauf story — at your convenience.

FRUEHAUF TRAILER DIVISION ▪ FRUEHAUF CORPORATION
10942 Harper Avenue ▪ Detroit 32, Michigan

XTRA'S FRUEHAUF TRAILERS FOR PIGGYBACKING RUNS!



XTRA'S 4100 Trailers make up a national floating fleet for American and Canadian railroads, the trans-oceanic carriers and the common carriers that participate in XTRA'S unique equipment coordination system. Founded in 1958 with the basic objective of rendering a fast, efficient interchange and maximum usage of equipment, the company has enjoyed a rapid growth, last year piggybacking over 3¼ million tons of cargo. Fruehauf Trailers in the fleet are mostly Volume☆Vans, Platforms and Insulated Vans. An additional 180 of these three Fruehauf types have recently been purchased. XTRA'S headquarters are in Boston, with field offices in Atlanta, Chicago, New York, San Francisco and St. Louis.

FRUEHAUF TRAILERS
Since 1914

"ENGINEERED TRANSPORTATION"—The Key to Transportation Savings

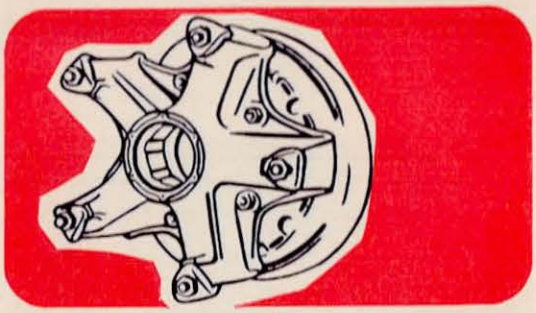
DAYTON PRODUCTS

DAYTON PIGGY-PAK PRODUCTS

TRANSPORTATION ENGINEERED

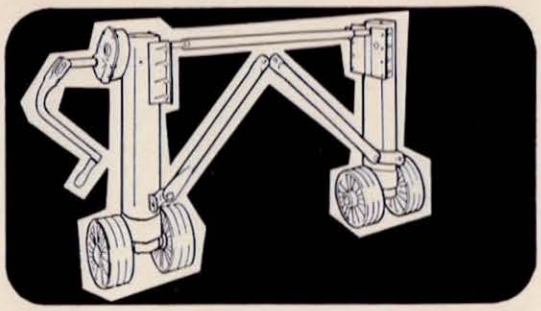
...Proved For All Piggy Back Operations

Today, over 60% of the heavy duty vehicles (over 16,500 G. V. W.) are equipped with Dayton Wheels. The leadership of Dayton Steel Foundry extends as well into brake drums, tandem suspensions and landing gears. Backed by the largest distributing organization in the country. You are assured of fast, complete service on all Dayton Steel Products for your nearest service point is no more than an hour or two away.



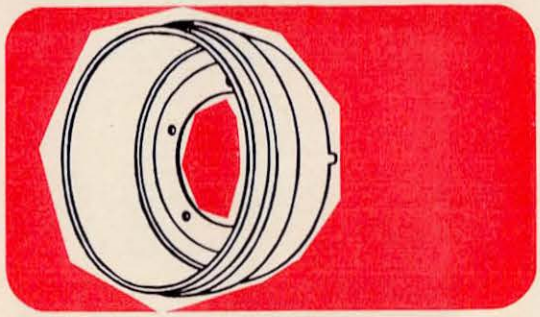
DAYTON WHEELS

The Dayton Cast Spoke Steel Wheels are machined to exacting tolerances. Lateral and radial runout are virtually non-existent. Dayton Steel Wheels—in 3, 5 or 6 spoke design—are cooler running, have an exceptionally high strength to weight ratio and are designed to stand the severe stresses of high speeds and heavy loads.



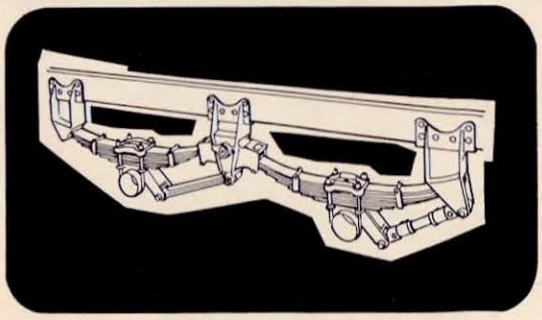
DAYTON HOMAN LANDING GEARS MODEL HH-500

Exclusive patented oval design. This oval design eliminates twisting and binding action. Weighs but 205 lbs. and pound for pound is the strongest landing gear made. Costs a little more yet does the job so well it is the most economical landing gear you can buy.



DAYTON BRAKE DRUMS

An exclusive Dayton metallurgical development assures maximum heat absorption with a minimum of cracking, checking and warping in Dayton Drums. Make in two types—cast and centrifugally fused. Both drums are original equipment on most heavy duty trailers and tractors.

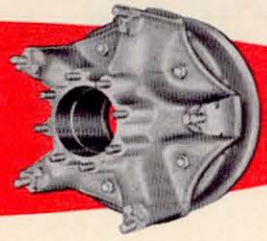


DAYTON SINGLE AND TANDEM SUSPENSIONS

11 basic types. Models are available with built-in rubber cushions which protect equipment by absorbing continuous, sharp in-transit vibrations. These suspensions are standard equipment on many leading trailers. Lightweight. Engineered for longer vehicle life, more payload and increased operating efficiency.

SPECIFY DAYTON—
FOR QUALITY...SAFETY...ECONOMY...RELIABILITY
Write for descriptive catalogs.

THE DAYTON STEEL FOUNDRY COMPANY
BOX 1022 • DAYTON, OHIO 45401



Reading's new route to decision-making

Size up the 'big picture,' then zero-in on the particular problem. That's the management engineering approach Reading industrial engineers are using, an AIIE convention was told.

A "management engineering approach"—one responsible for seeing over-all needs as well as solutions to individual problems—holds the key to the railroad future, says C. E. Bertrand, Reading executive vice president.

Mr. Bertrand, addressing the annual convention of the American Institute of Industrial Engineers, said he questioned whether the term "industrial engineering" is really broad enough to cover what industrial engineers can do for railroads. He suggested "management engineering" or "management research" as possible alternatives, calling the profession one that "specializes in looking at the whole picture, then isolating the particular operating and physical problems without losing sight of the picture as a whole."

● **The Reading's experience.** Mr. Bertrand explained what industrial engineering is doing for the Reading. He pointed out that the Reading in 1963 began a $30-million capital improvement program made possible by a government loan (RA, Sept. 16, 1963, p. 13). "We obtained this money for three basic purposes," Mr. Bertrand said, "to acquire new diesel locomotives, to replenish working capital, and to provide major capital improvements." He explained how what he terms the management engineering approach was used to determine the best way to divide the money among these projects. In fact, Mr. Bertrand added, the major portion of the time of Reading's industrial engineering staff is now spent in this way.

"No project requiring a capital expenditure can be put into effect until a thorough analysis of all its features has been made, both by the department recommending the improvement and by the industrial engineers who make an independent evaluation of the anticipated benefits."

● **Motive-power analysis.** Part of the funds in the capital improvement program, Mr. Bertrand noted, were "slated to be used to purchase new diesel-electric locomotives. Road units among these are characterized by one major difference from the units they are replacing. Instead of being rated at 1,500 and 1,600 hp each, they are rated at 2,250, 2,400, and 2,500 hp. The new high-horsepower units are capable of moving more tonnage than the earlier units, and they can move it at higher average speeds."

With the higher-horsepower locomotives, Mr. Bertrand said, a management decision had to made whether to improve schedule time or to increase train tonnage.

"Basically," the Reading officer said, "the information we need to make the right decision depends on mechanized information handling."

● **Freight-train reports.** "On the Reading, we instituted at the beginning of this year a system of mechanized reporting of freight-train performance. Twice a day, every day, our top transportation officers have placed before them an accurate and almost literally up-to-the-minute report on Reading's freight-train performance."

The long-range view

"The first of these two daily reports is available shortly after eight in the morning. It covers performance for the 18-hour period ending at six that same morning. The second report is available at about 2:15 p.m. It covers performance for the six-hour period ending at noon that same day.

"Twice a month, a summary of performance is prepared. This permits a quick check of our operations and indicates where long-range corrective action might be needed."

● **'Top priority.'** With this kind of mechanized train information, the Reading is set up to provide reliable on-time performance, Mr. Bertrand noted. "We make it a matter of top priority to see that we are providing it."

As examples, he mentioned two interline symbol freight trains. A daily-except-Sunday train, he said, which handles cargo from Philadelphia for Chicago and western points, operated 23 times in January and was on time for its connections only 13 times. "In February, this train was operated 25 times and was on time 15 times. In March, the train operated 26 times and was on time for connections 23 of those times. Performance of this train had improved from 13 out of 23 on-time arrivals to 23 out of 26."

The other example Mr. Bertrand cited is a New England symbol freight train which operates from Allentown for Chicago and St. Louis. "This train operated 20 times in January and was on time for connections 9. It operated 29 times in February and was on time for connections 23. It operated 31 times in March and was on time for connections 29 of those times."

● **New AIIE division.** During the convention, preliminary steps were taken to form a professional AIIE group to be known as the Transportation Division. The division would be composed of industrial engineers from railroads and other transport agencies. The group heard J. F. Quinn, director of industrial engineering, Bessemer & Lake Erie, say that probably no area of the economy offers so much potential for industrial engineers as transportation.

H. B. Christianson, director of industrial engineering, Missouri Pacific, predicted to the group that, while industrial engineers will see and participate in some further shrinkage of railroad facilities and personnel, the inherent economies of the industry will mean that, from now on, it will be handling a steadily growing proportion of the nation's intercity freight traffic. He said rail freight transportation is a real growth industry.

Broadly trained industrial engineers are best fitted to handle the diversified problems encountered on railroads, Mr. Christianson said. Compared with other industries, he added, railroad industrial engineering usually involves more widely dispersed operations and smaller groups of workers.

● **Profitable, too.** Citing some industrial engineering activities on the MP, Mr. Christianson explained how modifying flow patterns, building and rebuilding some freight terminals, and coordinating rail and truck operations are enabling his road not only to stay in LCL service, but to realize some return from the operation. Rearrangement of the MP's main freight-car shop, changes in track maintenance practices, and determination of the most economical routes over which to operate trains were also described.

Mr. Christianson called the railroad potential for automation second only to that of pipe-lines and added that cybernetics, containerization and analysis of total transportation from shipper to consignee will be important industrial engineering activities in the future. ■

U25B completes 27,000,000 unit-miles on 10 major American railroads

General Electric U25B's, now logging over two million miles a month, are providing faster service at lower cost on a growing number of railroads. Evidence of operating improvements and increased revenue capacity continues to mount.

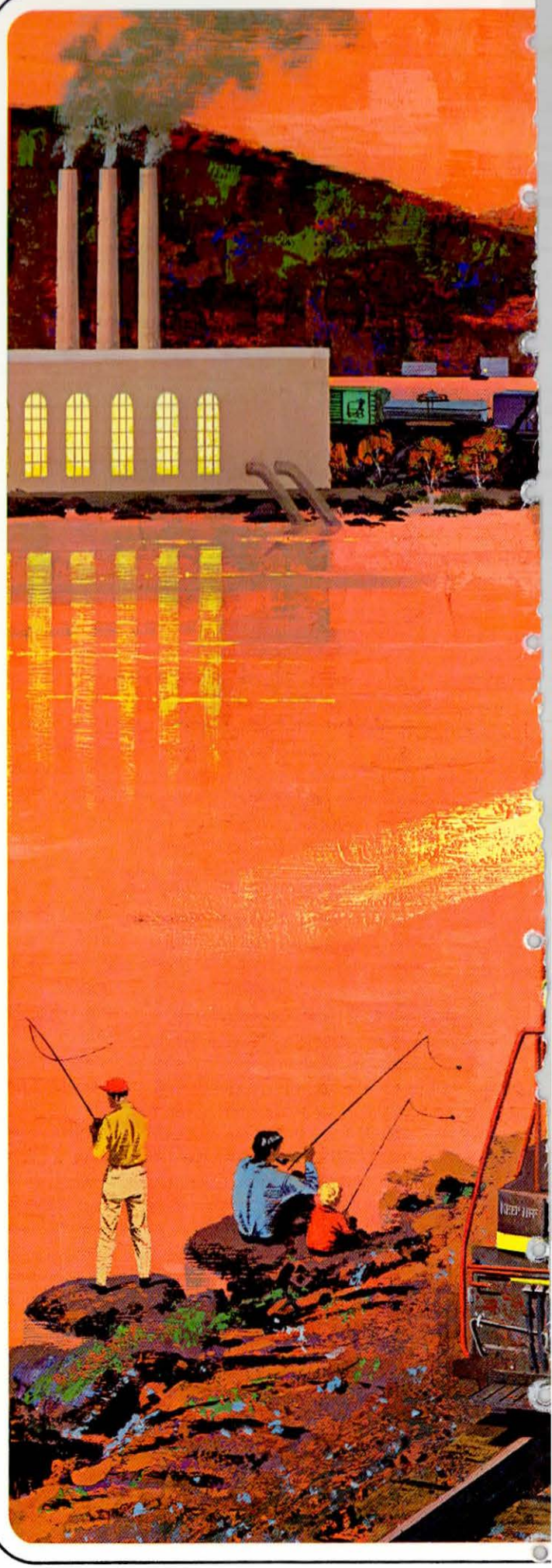
A 40 percent reduction in units required for high speed merchandise trains has been realized by one railroad. These fewer U25B units not only maintain schedules but during a comparison study averaged 27 percent greater tonnage hauled.

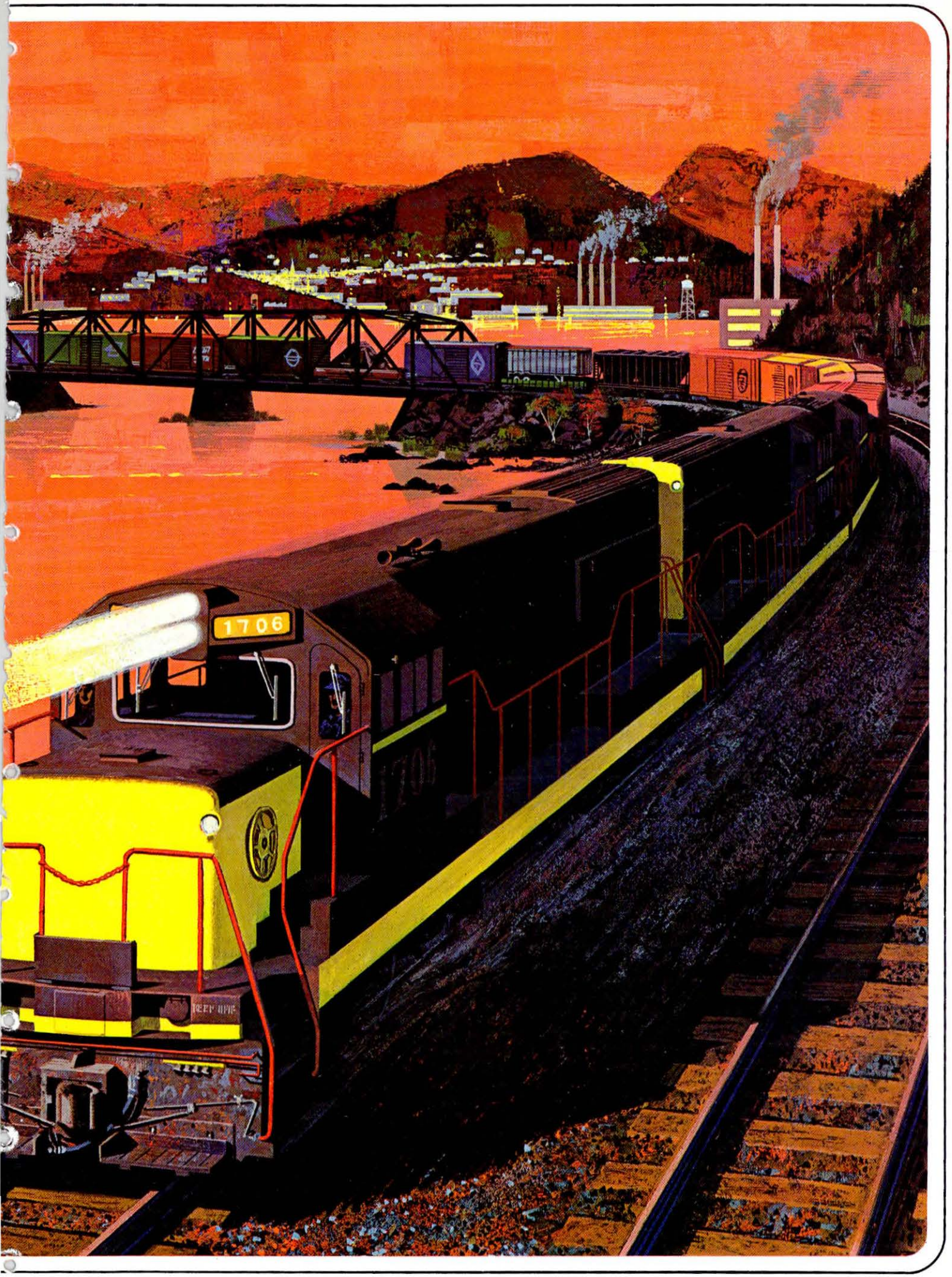
On another railroad, four 2500-hp U25B's replaced five older units on a typical 14,000-ton coal train operation through mountainous terrain. Running time has been reduced 14 percent.

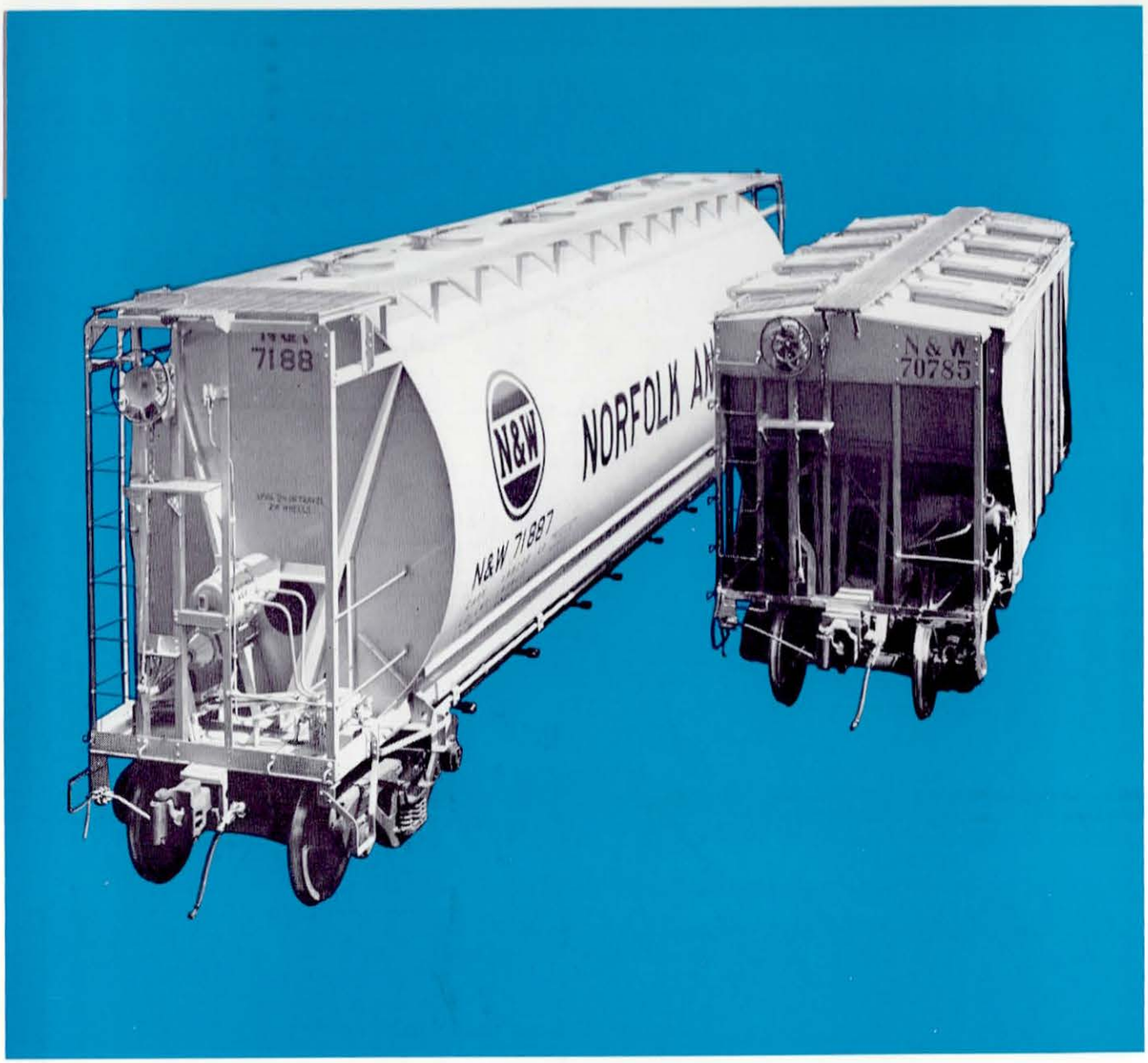
Recently, General Electric introduced two new high-horsepower units. The six-axle U25C, now at work on two railroads, provides 85,800 pounds tractive effort at its continuous rating. For the additional economy of 5000 hp in a single unit, General Electric also has the eight-axle U50 in service.

For more information on how this wide range of motive power can meet your requirements, call your General Electric transportation engineer. He will be happy to prepare a locomotive application study for your consideration. 117-26

GENERAL ELECTRIC




1706



"Average New N&W Car Has Increased 35.5% In Capacity Since 1953."

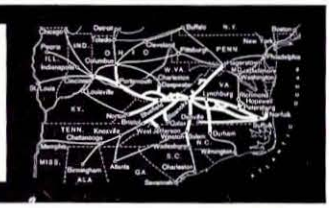
Eleven years ago new cars being purchased by the Norfolk and Western had an average capacity of 62.2 tons. Today, the new cars are more than a third larger: average capacity is now 84.3 tons. Benefit to you: lower shipping costs per unit.

Bigger cars also mean fewer cars are needed to deliver the same amount of cargo. You can order raw materials and components less frequently because today's larger carloads last longer. You needn't make as many outgoing carload shipments to distributors either. More goods can be moved to customers who order by carload lots.

And these new king-sized cars are usually custom-built for special cargoes. New concepts of loading and unloading mean substantial savings can be made at both ends of the line.

Larger, more efficient freight cars are another tangible example of the N&W's *service concept*. See how this concept can speed your shipments and save you money. All it takes is a call to your N&W freight traffic representative. Call him today.

N&W



Norfolk and Western Railway • General Offices • Roanoke, Va.

EXCLUSIVE INTERVIEW WITH C&EI'S MATHEWS

Top-management approach to TOFC

Piggyback growth has parked a host of new problems squarely in management's lap. They are being attacked head-on by C&EI.

Piggyback's great successes, over the past decade, sometimes tend to overshadow its problems—the growing pains of the lusty 10-year old. Chicago & Eastern Illinois, early this year, decided to take a hard, new look at the growing child. Here, C&EI president David O. Mathews—a lawyer with prior service with the ICC, the Office of Defense Transportation and the Justice Department—tells how C&EI plans to guide piggyback to full maturity.

Q. Mr. Mathews, did C&EI make TOFC development a direct responsibility of top management by making Harvard R. Osmond executive vice president with broad supervision over TOFC operations and promotion?

A. Yes. Mr. Osmond will perform the normal functions of an executive vice president and in addition take responsibility for supervision of all C&EI piggyback operations.

Several years ago we had a man assigned exclusively to piggyback operations. He reported directly to me. Ultimately that unit was broken up—primarily because our connections at that time would not work with us on interline piggyback operations as they have more recently.

Now, with important traffic creating all kinds of relatively new problems in areas like pick-up and delivery, keeping track of trailers, equipment rentals, charges and, importantly, the education of C&EI men—from top to bottom—on how to use this new tool, we felt the time had come to put the focus on right from the top.

Q. What prompted this decision at this particular time?

A. The present breakthrough has come about primarily because of the willingness of the Louisville & Nashville and the Atlantic Coast Line to work with us on piggyback operations. Our Southwest connections also are working with us. The Missouri Pacific, for instance, has put in a schedule out of St. Louis to the Southwest which ties in very well to our schedules. The opportunities are much greater now than they were then.

David O. Mathews

We used to have the burden of all the terminal expenses for Chicago-Evansville moves and Chicago-St. Louis movements. One of the major items of piggyback cost is terminal expense. We were unable at that time to achieve any kind of a major breakthrough in the business simply because our connections were not greatly interested in developing piggyback cooperatively with the C&EI.

Q. To what would you attribute this change in thinking?

A. Circumstances change, and railroad companies change managements from time to time. Bill Kendall [William H. Kendall, L&N president], I think, is extremely traffic minded. Downing Jenks [MP president] is also extremely traffic minded, as is Tom Rice [ACL President W. T. Rice].

One of the problems in this field—in all railroading for that matter—is to gain the acceptance not only of industry leaders but also of the people further down the ladder for the new concepts and new approaches—without which piggyback would die on the vine.

C&EI's May 1 announcement of Mr. Osmond's promotion to executive vice president with complete responsibility for piggyback merely recognizes the increasing importance—the growth possibilities—of piggyback. Primarily, it gives added emphasis, by the assignment of major responsibility for the development of piggyback traffic to the president's office.

It should give added emphasis to what we think is a promising—but difficult—field. For example, the matter of pick-up and delivery of trailers, operations by motor common carriers to and from C&EI facilities, the questions of legal liability in a variety of circumstances under the various plans—these are all areas somewhat new to ordinary operating men. The average railroad operating man hasn't had any motor-carrier experience. True, he may have some pick-up and delivery operation experience, but this, certainly, has been a minor phase of our operations.

When you consider all the various plans, you find a variety of motor-carrier pick-ups and deliveries to and from our ramps. Too, there are contracts, matters of legal liability, the matter of charges, all of which need, in our opinion, the scrutiny of a top-flight man—a man who has the rank to get things done.

Our operating vice president and general manager will continue to operate and be responsible for the spotting of flat cars at the transfer facilities and for switching them out and making up the trains and getting them over the road. Functions in that respect aren't changed.

We have had other problems with piggyback facilities that require the attention of one man, a competent man. We are now handling high-rated traffic which is very tempting to thieves and gangsters. We have had some losses. Piggyback operations require someone who will concentrate on adequate protection and someone who will cooperate with police authorities at all points. After all, an important factor in piggyback business is the safe handling of traffic from the time it

RAILROADING AFTER HOURS WITH JIM LYNE

WHOSE DUFF IS BEING SAT ON?—A chiropractor, G. R. Preston, at Marlette, Mich., has sent me several articles (one of them by AAR's Jim Sites) clipped from the March Rotarian magazine telling about the excellent passenger service on Europe's railways. Another piece reports on Japan's Tokaido super-railroad.

LYNE

Chiropractor Preston suggests U.S. railroad managements "get off their collective duff and do something constructive about the passenger situation here." In our last week's issue we recorded to how great an extent the North American railways are *not* resting on their backsides, either collective or individual, in seeking to attract passengers.

The railways of Europe and Japan do not surpass those of North America in their enterprise. Where they do surpass ours, though, is in the extent to which they are free from burdensome taxation and compulsory over-manning. Nor do they face the competition of superhighways and air terminals—vigorously promoted by the federal bureaucracy, and endlessly fertilized by the public treasury.

The duff-sitting that is injuring railroad passenger service in this country is that by the electorate that supports or condones flagrant political favoritism of the railroads' rivals.

FOUR LUCKY LEWISES—There are four Lewis brothers who work for the PRR in the Emporium, Pa., area—and each of them has the letter O as his middle initial. Not long ago (according to the Emporium Independent), Emery O. Lewis, along with a track supervisor, discovered a broken rail and proceeded to advise a nearby tower to stop an approaching train. It turned out that the engineer of the head diesel on this train was Brother Walter O. Lewis. The engineer in the pusher was Brother George O. And the track repair crew sent out to replace the rail included Brother Frank O.

Maybe such occurrences—usually termed coincidences—may occasionally be something a little more complex than that. It is supposed to be just a coincidence if a "water witch" locates water with a hazel stick.

THOSE ALERT JENNEY PEOPLE—The Boston gasoline firm (whose name I mis-spelled as Janney in this corner on April 27) is continuing to defend commuting by rail.

"What good is a hub without its spokes?"—the Jenneys ask in a recent newspaper ad. They picture a wheel, with its hub in place but half the spokes missing. This picture symbolizes Boston—with its Old Colony passenger trains no longer running, and other railroads seeking to abandon their local service.

"This will mean [the ad reads] that thousands of rail commuters will be physically forced onto overloaded expressways . . . they will have the impossible problem of parking . . . adding further to the congestion that will choke the Hub City and stunt New England's progress."

Jenney is trying to awaken Yankees to their self-interest in enabling railroads to continue their passenger service. If railroad people were saying such things in their own behalf, their motives would probably be suspect. That's the reason why leadership on such policy questions has to be assumed by knowledgeable "outsiders." Boston isn't the only big city where such perceptiveness by influential non-railroaders would be equally appropriate.

CANAL-GREAT LAKES TO VANCOUVER—The Toronto Globe & Mail reports that the Ralph M. Parsons Company, of Los Angeles, is proposing a $100-billion project which would include a canal navigable by ocean vessels from Lake Superior to Vancouver. The project would draw water from as far away as the Yukon River, and envisages a 500-mile reservoir in the Rocky Mountain trench. Alleged benefits, besides the canal, would include hydro-electric power; irrigation for Canada, the U.S. and Mexico; reduction of water pollution in the Great Lakes, etc., etc.

I've often felt that waterway enthusiasts' ambitions would be satisfied only when the Queen Mary could steam up the S. Platte and dock in Denver. I underestimated those boys' imaginations.

In normal business you invest money in the expectation of a profit. In politics you may plow in even more money, and you don't have to foresee a profit to make the project attractive, provided it promises to win a lot of votes.

How C&EI tackles TOFC

(Continued from page 73)

to stay. They've grown and their business is still growing. I think we should do business with them if by so doing both parties come out ahead in the movement. Why not? I think there was a time when the old-time railroader looked at motor common carriers and highway transport as his enemy and wasn't interested in doing business with them under any circumstances. I think too many railroaders still feel the same way.

Q. What percentage of C&EI's gross freight revenue now is piggyback?

A. Almost 10%. For 1963, it was $3 million out of gross revenues of about $36 million.

Q. Do you have any estimate as to how high this percentage may go?

A. I think it will be in the neighborhood of 15% in 1964.

Q. Would you say that the railroad business right now is at a time when they should be putting some of their best and brightest men into the struggle to increase TOFC business?

A. Yes. Based on our experience, if our problems and our observations are common to the industry, I would say the industry should do that. I don't mean to say by this that this set-up we have is going to be a model—or permanent. It is going to be there until we feel we have reached a satisfactory solution to C&EI's piggyback problems. Then, I see no reason why the ordinary areas of responsibility can't be placed where they are with respect to box-car traffic. If you've got a special problem you've got to find a special solution. I think railroaders have got to learn this piggyback business. I think in order to learn it you've got to put a good man in charge of it and be sure he communicates with all the other people.

The reason this is also important is that we on the C&EI are convinced that piggyback is not taking traffic out of box cars. It is bringing business to the railroad—additional box-car business, as a matter of fact. Shippers using our piggyback service are delighted with it and are giving us additional traffic. Our first four months this year had a 14.5% increase in general traffic, excluding coal. Our over-all business and revenue is up—and we attribute this to piggyback to a large degree. ■

EXCLUSIVE INTERVIEW WITH C&EI'S MATHEWS

Top-management approach to TOFC

Piggyback growth has parked a host of new problems squarely in management's lap. They are being attacked head-on by C&EI.

Piggyback's great successes, over the past decade, sometimes tend to overshadow its problems—the growing pains of the lusty 10-year old. Chicago & Eastern Illinois, early this year, decided to take a hard, new look at the growing child. Here, C&EI president David O. Mathews—a lawyer with prior service with the ICC, the Office of Defense Transportation and the Justice Department—tells how C&EI plans to guide piggyback to full maturity.

Q. Mr. Mathews, did C&EI make TOFC development a direct responsibility of top management by making Harvard R. Osmond executive vice president with broad supervision over TOFC operations and promotion?

A. Yes. Mr. Osmond will perform the normal functions of an executive vice president and in addition take responsibility for supervision of all C&EI piggyback operations.

Several years ago we had a man assigned exclusively to piggyback operations. He reported directly to me. Ultimately that unit was broken up—primarily because our connections at that time would not work with us on interline piggyback operations as they have more recently.

Now, with important traffic creating all kinds of relatively new problems in areas like pick-up and delivery, keeping track of trailers, equipment rentals, charges and, importantly, the education of C&EI men—from top to bottom—on how to use this new tool, we felt the time had come to put the focus on right from the top.

Q. What prompted this decision at this particular time?

A. The present breakthrough has come about primarily because of the willingness of the Louisville & Nashville and the Atlantic Coast Line to work with us on piggyback operations. Our Southwest connections also are working with us. The Missouri Pacific, for instance, has put in a schedule out of St. Louis to the Southwest which ties in very well to our schedules. The opportunities are much greater now than they were then.

David O. Mathews

We used to have the burden of all the terminal expenses for Chicago-Evansville moves and Chicago-St. Louis movements. One of the major items of piggyback cost is terminal expense. We were unable at that time to achieve any kind of a major breakthrough in the business simply because our connections were not greatly interested in developing piggyback cooperatively with the C&EI.

Q. To what would you attribute this change in thinking?

A. Circumstances change, and railroad companies change managements from time to time. Bill Kendall [William H. Kendall, L&N president], I think, is extremely traffic minded. Downing Jenks [MP president] is also extremely traffic minded, as is Tom Rice [ACL President W. T. Rice].

One of the problems in this field—in all railroading for that matter—is to gain the acceptance not only of industry leaders but also of the people further down the ladder for the new concepts and new approaches—without which piggyback would die on the vine.

C&EI's May 1 announcement of Mr. Osmond's promotion to executive vice president with complete responsibility for piggyback merely recognizes the increasing importance—the growth possibilities—of piggyback. Primarily, it gives added emphasis, by the assignment of major responsibility for the development of piggyback traffic to the president's office.

It should give added emphasis to what we think is a promising—but difficult—field. For example, the matter of pick-up and delivery of trailers, operations by motor common carriers to and from C&EI facilities, the questions of legal liability in a variety of circumstances under the various plans—these are all areas somewhat new to ordinary operating men. The average railroad operating man hasn't had any motor-carrier experience. True, he may have some pick-up and delivery operation experience, but this, certainly, has been a minor phase of our operations.

When you consider all the various plans, you find a variety of motor-carrier pick-ups and deliveries to and from our ramps. Too, there are contracts, matters of legal liability, the matter of charges, all of which need, in our opinion, the scrutiny of a top-flight man—a man who has the rank to get things done.

Our operating vice president and general manager will continue to operate and be responsible for the spotting of flat cars at the transfer facilities and for switching them out and making up the trains and getting them over the road. Functions in that respect aren't changed.

We have had other problems with piggyback facilities that require the attention of one man, a competent man. We are now handling high-rated traffic which is very tempting to thieves and gangsters. We have had some losses. Piggyback operations require someone who will concentrate on adequate protection and someone who will cooperate with police authorities at all points. After all, an important factor in piggyback business is the safe handling of traffic from the time it

leaves the shipper's warehouse to the time it gets to the customer's door. While we have always had police problems in our yards, with the development of piggyback business we've got legal liabilities, which means police problems, in some instances, for a good many motor miles.

Q. How will C&EI's piggyback sales effort be affected by this new focusing of management attention?

A. Well, an area we think needs attention is the entire area of charges for piggyback service. At least it does on our property and I think that it is true on most railroads. The piggyback rate structure has mostly developed over the past 10 years—and we think a comprehensive study of the existing rate structure on our railroad is needed. We also need to study our costs—for two primary purposes. First of all, we want to assure ourselves that C&EI's piggyback operations are efficient. I am primarily referring to off-railroad pick-up and delivery, to claims and other important aspects of the work. Trailer rental is another thing needing study. We rent most of our trailers. Are we getting them at proper prices? Are we assured of an adequate supply?

Importantly, too, we think an effort should be made to maximize our profits. This sometimes means rate increases and sometimes it means reductions. There is nothing hard and fast about maximizing profits in the transportation business. For example, integral-train movements, by reducing rates, are making more money for railroads than carriers made under the old rates. We are getting greater economy in operation and getting greater volume as a result of reducing rates. The same principles apply in any railroad operation.

Also, we are going to depend upon our own cost section for knowledge of our costs. That's what's important to C&EI—our costs.

Q. Do you have any particular areas of accessorial charge that you are concerned with, Mr. Mathews?

A. No. There is no particular area. I would say the prime reason we made the move now is that we now have better than a year and a half of operational experience with our all-piggyback train to the Southeast. You can always learn things when you get the books out and look at the actual figures that you can't learn by speculation. You can put your finger on things.

Q. How will sales be affected by the change?

A. That's another area that we are going to tackle. Mr. Osmond as vice president of traffic was primarily responsible for developing new piggyback business. He has delegated that responsibility to a very capable man who has done a fine job. But we are convinced we can do an even better job by a study of the potentials in all the various plans. Once we determine the potentials, then we can go to the preparation of proper sales material—which would include information as to where the business is controlled, a study of costs of the potential customer. A study of what we can do would, relatively, be simple. Then I would think we would call in all of our freight salesmen, not only those on-line but also off-line, and explain to them the potential in piggyback and tell them, "Here are the tools, boys—go out and get the business."

When we get through with this new program we hope each of our off-line salesmen will be an expert. At least we expect to supply him with all the data and information and equipment he needs so he can go out and do an effective job for us. Again, we think that takes a study and the attention of a top-flight man.

Q. Do you have a definite schedule set up for these studies?

A. No. We have given Mr. Osmond that responsibility. I have suggested to him that we have a meeting of our sales people as soon as he is ready. I hope that will be by the first of July, but the date is going to depend a lot on how his work comes along. We are making available to him all our help and the facilities of all the departments.

Q. You mentioned piggyback equipment utilization . . .

A. One of the problems that has popped up here—and which is entirely new and foreign to the average railroader—is keeping track of trailers. We take a trailer here at Chicago, say, and put it on the ground at Atlanta—and that trailer may end up in New York City or someplace else. We've had quite a problem keeping track of equipment. There have been some other problems of development—accounting problems, billing problems, balance of equipment problems. Then there is another problem in piggyback, and that's one that's common to most new businesses. You've got the problem of conveying to the staff enthusiasm for it. All of us tend to resist change, and after we've been doing an operation one way for years, an attitude develops where you say, "This new thing, let's wait and see what the other railroads do" and "Let's not get into this thing too deep" and "You can see we are losing money on that," and you get opinions on top of opinions. So I want somebody who believes in it, to indoctrinate the whole staff. Let's convince everybody. Men won't work well unless they are convinced that what they are doing has possibilities. You've got to have enthusiasm.

Now, this organizational set-up, at least in my present thinking, is not a permanent thing. But I think it's promising. So long as we have it organized this way I want the best qualified man I have for that job—to give fine attention to it both in developing new business and in promoting efficient handling of the business we have. We don't intend to interfere with the function of our general manager in handling trains at all, beyond saying we want so many flat cars at this terminal at this time and we want those flat cars, when loaded, pulled out of there and gotten to Atlanta at a certain time. This will be his responsibility.

Q. Mr. Matthews, is piggyback a potent weapon for getting freight in private carriage off the highway and back to the railroads?

A. As we see it, we ought to be able to handle much of this business cheaper than any private company and I think cheaper than any motor common carrier can handle it.

Q. Motor-carrier costs seem to be climbing pretty rapidly . . .

A. Well, the truckers agreed to increase wages for their drivers in January. They confidently expected

'The potentials in piggyback, according to our present studies, are almost unlimited. We think it could be something terrific. We should coordinate with other forms of transportation where we can make a profit. The motor common carriers are here to stay. I think we should do business with them if both parties come out ahead.'

C&EI piggyback facilities at Chicago are equipped with both end-loading ramp and side-loading overhead crane. Here, as at St. Louis and Evansville, Ind., C&EI has ample room for terminal expansion as TOFC business continues to grow.

they would be able to pass that added cost along in higher rates to shippers. But it was reported recently that shippers were resisting violently any attempt to raise their charges and were diverting business to piggyback, some to box cars. They are bringing their business back to the railroads. The truckers are caught in a cost squeeze. But I think probably the wage scale as it was before Mr. Hoffa negotiated the latest increase was still so high that we can make money for the ordinary motor common carrier and for the ordinary private motor carrier though piggyback. He — Hoffa — just gave it a boost.

Let's take a hard look at this thing. If we've got the vision to develop facilities at our major terminals to handle the business that's tendered to us then, in my opinion at least, we should be able to transport a trailer over our railroad to points we serve at costs that will enable us to make a fair profit and still provide transportation for a private carrier or motor common carrier at a rate cheaper than he can do the job himself.

I say we can transport a trailer between, say, Chicago and Atlanta cheaper than the motor common carrier can do it. And I think we can do it quicker —which is another important element. We leave here at 11:30 p.m. and we are in Atlanta at 7:30 the next evening. The second morning we are in Jacksonville. One shipper told me that between Chicago and Atlanta we— C&EI-L&N — were 12 to 18 hours faster than private trucking or any motor common carrier. That introduces elements of investment and inventory and things of that sort into transportation decisions made by shippers.

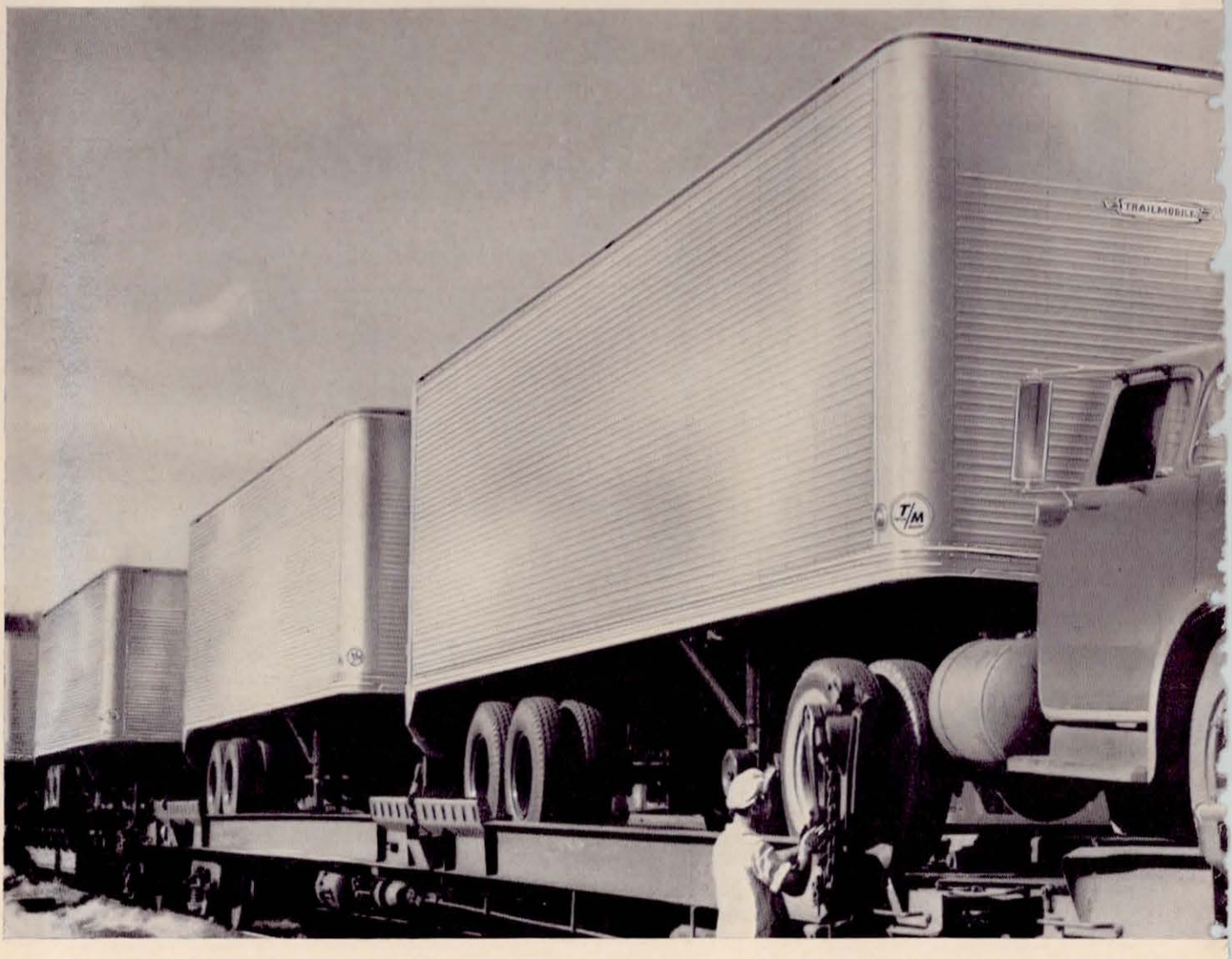
Q. As your piggyback business increases, are you experiencing terminal problems or are your terminal facilities relatively easy to expand?

A. I think the answer to that is very simple. If volume develops in Chicago the acquisition of adequate terminal facilities obviously is going to be a problem. That is one of Mr. Osmond's further responsibilities—to be sure we plan ahead and have the facilities to handle the business. We think at the moment that we are in pretty good shape—that we could handle it even if business tripled. We've got room for expansion at St. Louis, and plenty of room at Evansville. We think we've made adequate plans for Chicago, but the potentials in piggyback, according to our present studies, are almost unlimited. We think it could be something terrific.

I think my views on piggyback can be summed up this way. We should coordinate with other forms of transportation where we can make a profit. The motor common carriers are here

(*Continued on page 78*)

When it comes to piggyback

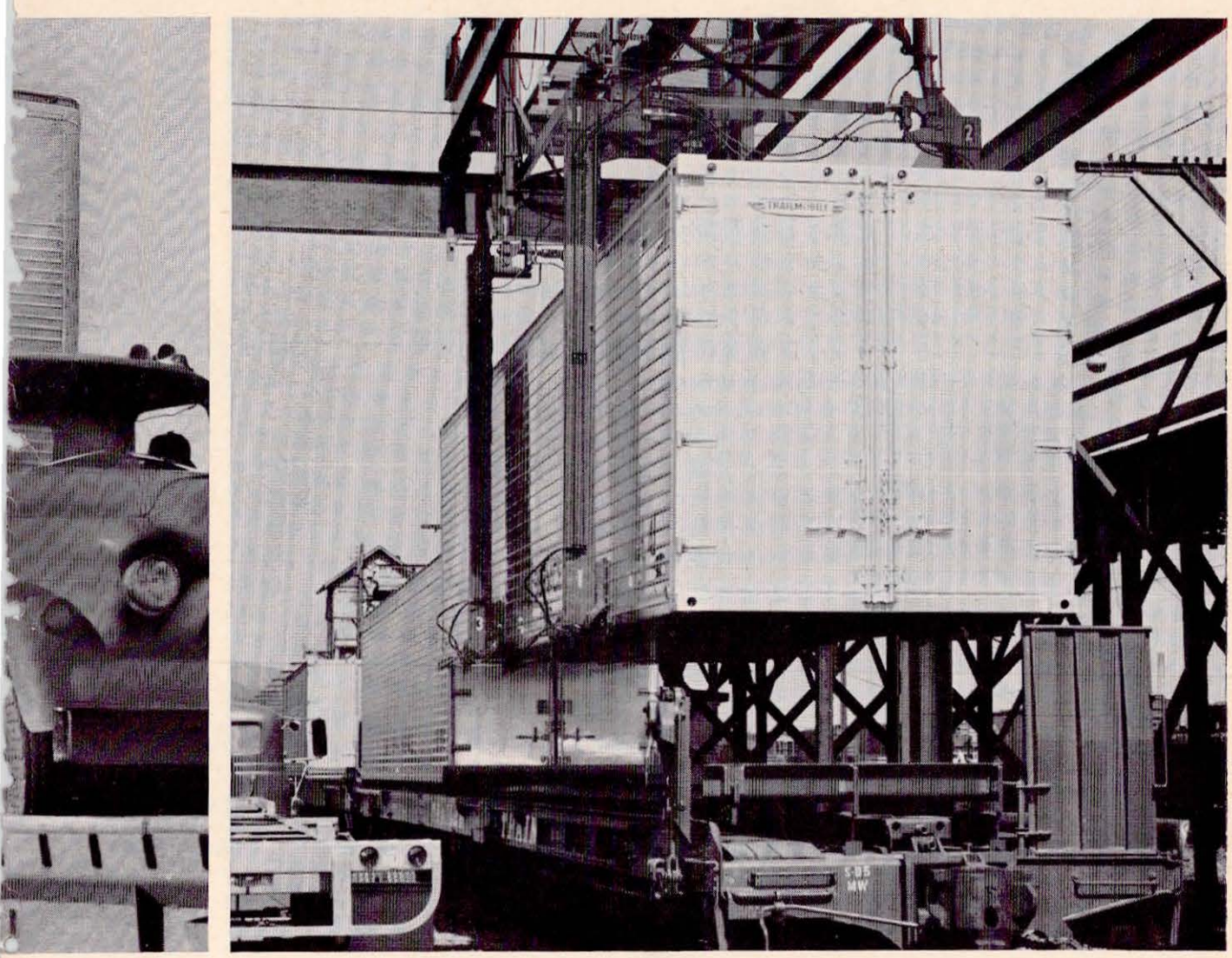


take advantage of Trailmobile's

No question about it: Every day more and more trailers are being taken for a ride—"piggybacked" to and from America's major markets. No question about this either: more and more knowledgeable shippers are looking to Trailmobile—the industry pioneer—to solve their piggyback problems. For Trailmobile piggyback trailers are custom-built to do the job . . . designed and engineered to meet your most exacting needs.

Container headquarters, too. As a pioneer Container builder, Trailmobile can offer the design experience you're looking for. Our engineers, working with Trailmobile's testing and research facilities, have worked out integrated, practical transportation systems for some of the biggest operators in the country. They'd welcome the opportunity to do the same for you, *whatever* your Container requirements may be.

and containers...



experience and know-how

Trailmobile—part of the Pullman family. Trailmobile is a division of Pullman Incorporated, which also includes Pullman-Standard division—world's largest and most experienced designer and builder of railroad equipment. This puts at Trailmobile's disposal even more research and testing facilities...perhaps the most modern and extensive facilities for developing piggyback and container concepts to be found anywhere.

Nationwide Sales and Service. Trailmobile covers the country. It's nice to know that wherever your equipment is, you never have to worry about parts or service. It all adds up: next time you're in the market for Containers or Trailers (either piggyback or over-the-road), check first with Trailmobile . . . now celebrating its 50th year of serving America's shipping industry.

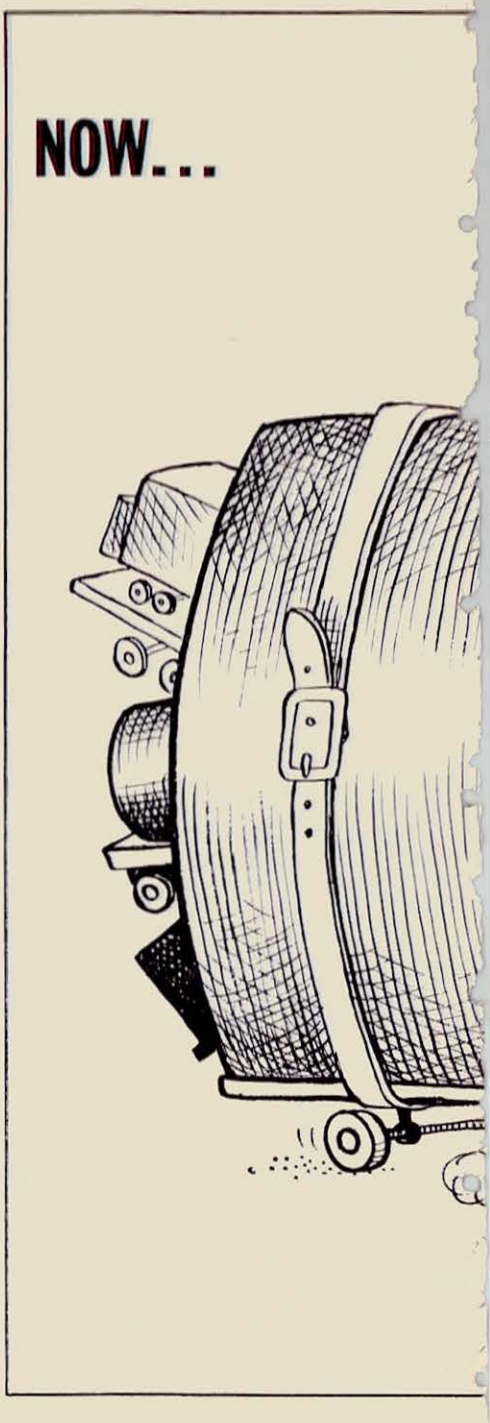
C-415

T/M TRAIL-MOBILE

TRAILMOBILE®

Cincinnati, Ohio 45209 • a division of Pullman Incorporated

SALES AND SERVICE FACILITIES IN PRINCIPAL CITIES



We've so much more to offer

If today's Southern Railway freight salesman carried a "sample case," it would have to be a mighty big one.

Yesterday's salesman on Southern had only a few standard freight cars to put at your service. Today he offers you a comprehensive "product line" of equipment and services, mostly developed by Southern, and all custom-tailored to save you money while meeting your most exacting transportation needs.

At your service is the largest fleet of special-purpose, cost-cutting freight cars in the South . . . cars equipped with special devices that practically eliminate damage and the need for expensive bracing and packag-

in our "sample case" today!

ing...cars designed to cut your loading and unloading time and costs . . . *large* cars to provide incentive rates. Ready to serve you, too, are powerful new diesels . . . a fast-growing rail-highway service . . . modern electronic yards...the most advanced technology of all kinds...all designed to increase Southern's usefulness to you by giving you faster, better service, at lower cost.

Call our salesman. Let him show you how truly useful Southern can be to you.

SOUTHERN RAILWAY SYSTEM

WASHINGTON, D. C.

SOUTHERN RAILWAY SERVES THE SOUTH

LOOK AHEAD LOOK SOUTH

RAILROADING AFTER HOURS WITH JIM LYNE

LYNE

WHOSE DUFF IS BEING SAT ON?—A chiropractor, G. R. Preston, at Marlette, Mich., has sent me several articles (one of them by AAR's Jim Sites) clipped from the March Rotarian magazine telling about the excellent passenger service on Europe's railways. Another piece reports on Japan's Tokaido super-railroad.

Chiropractor Preston suggests U.S. railroad managements "get off their collective duff and do something constructive about the passenger situation here." In our last week's issue we recorded to how great an extent the North American railways are *not* resting on their backsides, either collective or individual, in seeking to attract passengers.

The railways of Europe and Japan do not surpass those of North America in their enterprise. Where they do surpass ours, though, is in the extent to which they are free from burdensome taxation and compulsory over-manning. Nor do they face the competition of superhighways and air terminals—vigorously promoted by the federal bureaucracy, and endlessly fertilized by the public treasury.

The duff-sitting that is injuring railroad passenger service in this country is that by the electorate that supports or condones flagrant political favoritism of the railroads' rivals.

FOUR LUCKY LEWISES—There are four Lewis brothers who work for the PRR in the Emporium, Pa., area—and each of them has the letter O as his middle initial. Not long ago (according to the Emporium Independent), Emery O. Lewis, along with a track supervisor, discovered a broken rail and proceeded to advise a nearby tower to stop an approaching train. It turned out that the engineer of the head diesel on this train was Brother Walter O. Lewis. The engineer in the pusher was Brother George O. And the track repair crew sent out to replace the rail included Brother Frank O.

Maybe such occurrences—usually termed coincidences—may occasionally be something a little more complex than that. It is supposed to be just a coincidence if a "water witch" locates water with a hazel stick.

THOSE ALERT JENNEY PEOPLE—The Boston gasoline firm (whose name I mis-spelled as Janney in this corner on April 27) is continuing to defend commuting by rail.

"What good is a hub without its spokes?"—the Jenneys ask in a recent newspaper ad. They picture a wheel, with its hub in place but half the spokes missing. This picture symbolizes Boston—with its Old Colony passenger trains no longer running, and other railroads seeking to abandon their local service.

"This will mean [the ad reads] that thousands of rail commuters will be physically forced onto overloaded expressways . . . they will have the impossible problem of parking . . . adding further to the congestion that will choke the Hub City and stunt New England's progress."

Jenney is trying to awaken Yankees to their self-interest in enabling railroads to continue their passenger service. If railroad people were saying such things in their own behalf, their motives would probably be suspect. That's the reason why leadership on such policy questions has to be assumed by knowledgeable "outsiders." Boston isn't the only big city where such perceptiveness by influential non-railroaders would be equally appropriate.

CANAL-GREAT LAKES TO VANCOUVER—The Toronto Globe & Mail reports that the Ralph M. Parsons Company, of Los Angeles, is proposing a $100-billion project which would include a canal navigable by ocean vessels from Lake Superior to Vancouver. The project would draw water from as far away as the Yukon River, and envisages a 500-mile reservoir in the Rocky Mountain trench. Alleged benefits, besides the canal, would include hydro-electric power; irrigation for Canada, the U.S. and Mexico; reduction of water pollution in the Great Lakes, etc., etc.

I've often felt that waterway enthusiasts' ambitions would be satisfied only when the Queen Mary could steam up the S. Platte and dock in Denver. I underestimated those boys' imaginations.

In normal business you invest money in the expectation of a profit. In politics you may plow in even more money, and you don't have to foresee a profit to make the project attractive, provided it promises to win a lot of votes.

How C&EI tackles TOFC

(Continued from page 73)

to stay. They've grown and their business is still growing. I think we should do business with them if by so doing both parties come out ahead in the movement. Why not? I think there was a time when the old-time railroader looked at motor common carriers and highway transport as his enemy and wasn't interested in doing business with them under any circumstances. I think too many railroaders still feel the same way.

Q. What percentage of C&EI's gross freight revenue now is piggyback?

A. Almost 10%. For 1963, it was $3 million out of gross revenues of about $36 million.

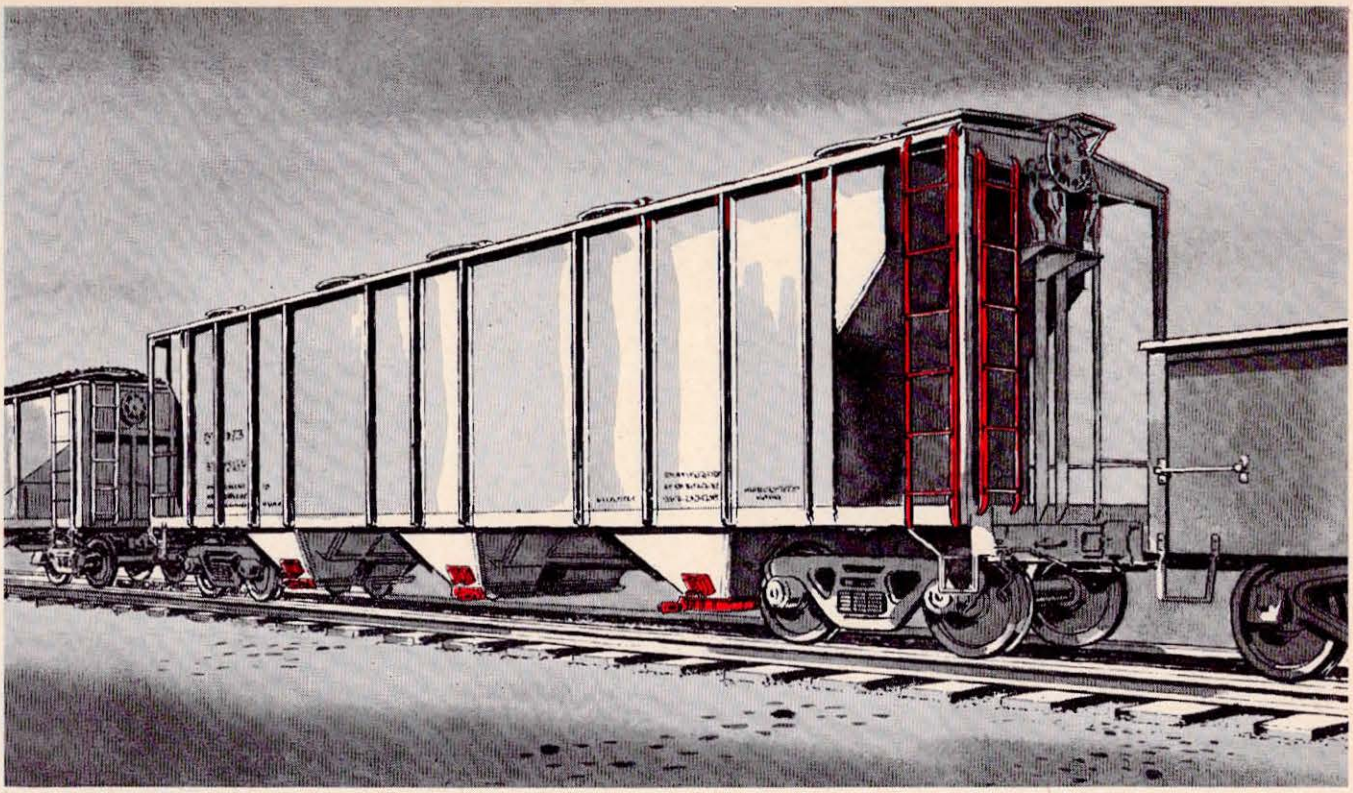
Q. Do you have any estimate as to how high this percentage may go?

A. I think it will be in the neighborhood of 15% in 1964.

Q. Would you say that the railroad business right now is at a time when they should be putting some of their best and brightest men into the struggle to increase TOFC business?

A. Yes. Based on our experience, if our problems and our observations are common to the industry, I would say the industry should do that. I don't mean to say by this that this set-up we have is going to be a model—or permanent. It is going to be there until we feel we have reached a satisfactory solution to C&EI's piggyback problems. Then, I see no reason why the ordinary areas of responsibility can't be placed where they are with respect to box-car traffic. If you've got a special problem you've got to find a special solution. I think railroaders have got to learn this piggyback business. I think in order to learn it you've got to put a good man in charge of it and be sure he communicates with all the other people.

The reason this is also important is that we on the C&EI are convinced that piggyback is not taking traffic out of box cars. It is bringing business to the railroad—additional box-car business, as a matter of fact. Shippers using our piggyback service are delighted with it and are giving us additional traffic. Our first four months this year had a 14.5% increase in general traffic, excluding coal. Our over-all business and revenue is up—and we attribute this to piggyback to a large degree. ■



Colored Sections of Illustration Show the Wine Vibrator Brackets, Power Geared Discharge Gates and Ladders.

IF YOUR COMPANY BUILDS OR REPAIRS FREIGHT CARS

. . . if they depend on you for quality railway appliances at the right time and the right price, better get in touch with WINE . . . a major supplier to the car building industry and railroads since 1912, and a source you can confidently depend on! For fast action, see your local Wine sales representative or contact the factory in Toledo.

GEARED TO PROGRESS P R I MEMBER

WINE RAILWAY APPLIANCES

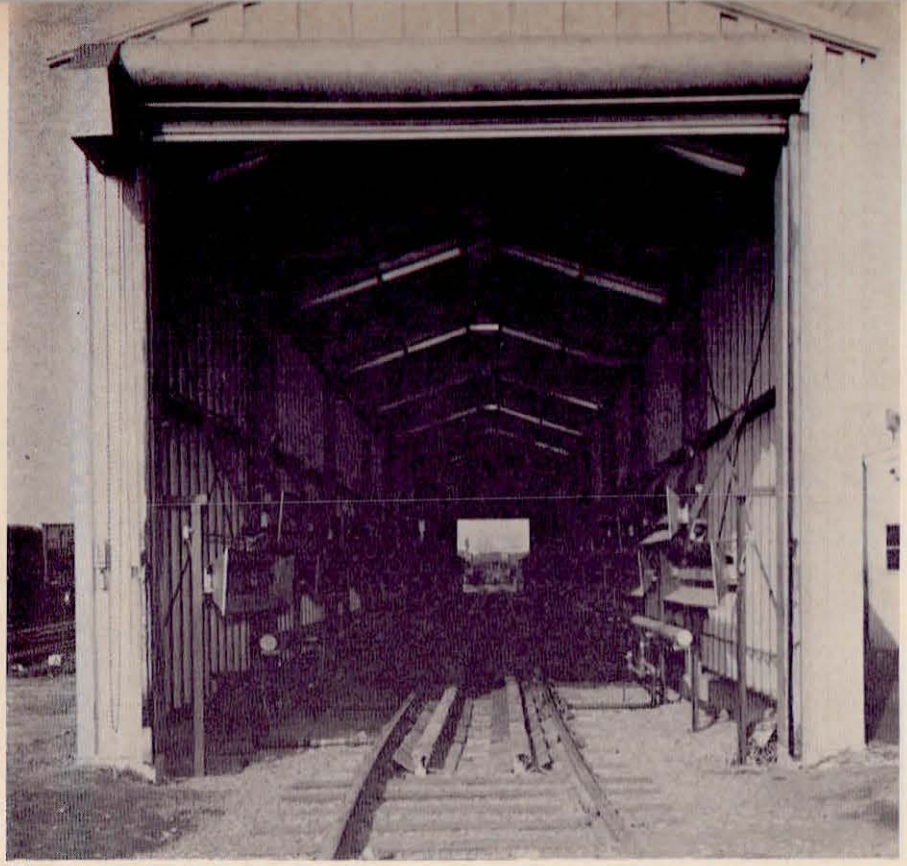
THE WINE RAILWAY APPLIANCE CO.

DIVISION OF UNITCAST CORPORATION • TOLEDO, OHIO 43609

Canadian Manufacturing Division: *Canadian Unitcast, Ltd.*, Sherbrooke

Sales and Service: *The Holden Co., Ltd.*, 614 St. James St., W., Montreal

Wine appliances include: Hopper Frames, Hinges and Door Locks • Discharge Gates • Drop End Locks • Drop End Balancers • Drop Bottom Balancers • Brake Balancers • Single and Double Roller Side Bearings • Lading Band Anchors, Fixed and Swivel • Vibrator Brackets • Interlock Pinless Hinges • Ladders • Grab Irons and Hand-Holds • Miscellaneous Car Castings • You can also depend on Wine for prompt delivery of spare parts.



Thawing shed will handle 5 to 6 cars at once. The infrared side heaters and under-car convection-type heaters are lit and operated from outside control panel.

Car thawer speeds coal-dock dumping

A modern car-thawing facility enabled the Western Maryland to raise its car-dumping operations from 3 to 15 cars per hour.

The Western Maryland is known as a coal road. Normally, from 35% to 40% of its revenue is derived from handling coal between mines and ships. The road con'inues to increase this traffic by constantly improving its operations and facilities.

- **Quick turnaround is basic.** Many of these improvements have been made at the road's coal pier at Port Covington, Md. This is because the WM believes that improvements which promote faster ship loading are important factors in attracting new business and in holding present business. The road is aware that, because it costs from $600 to $3,000 per day to have a ship tied up, coal exporters have a habit of seeking dock facilities where a quick turnaround is possible.

Recent improvements made by the road at Port Covington include two-trick operation, the deepening of the main and access channels for accommodating colliers of deeper draft, provision of additional areas for ground coal storage, and the installation of a new cross conveyor and belt feeder for easier coal blending and faster loading. The most recent improvement made at this location is the expansion of the car-thawing facilities.

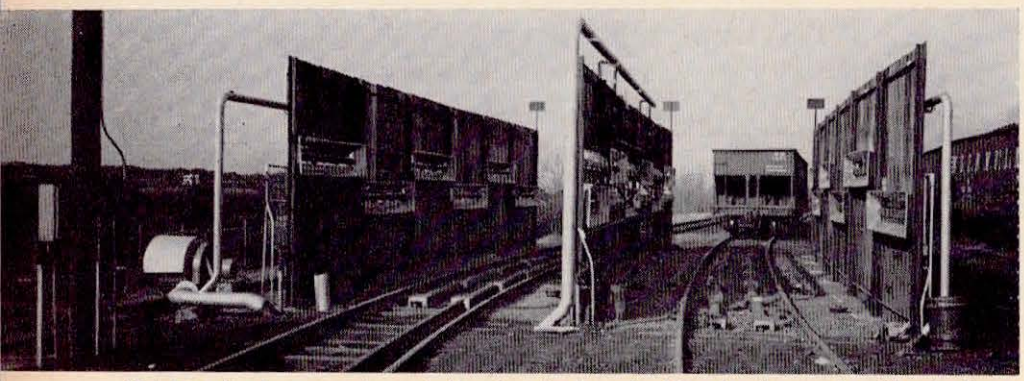
- **Five times faster.** The expanded thawing facilities now permit from 15 to 20 loaded cars to be thawed per hour, compared with an average of three cars per hour by the former facilities. The latter consisted of under-car heaters placed on five tracks in advance of the barney pit. The heaters, operated by natural gas, were long enough to heat one car on each track and were protected by windbreaks erected between tracks and on the outside of the outer tracks. This arrangement was not entirely satisfactory because much of the heat was blown away and lost. It was possible on days of high-velocity winds for only six cars to be thawed in one day.

The Western Maryland believes it now has the most efficient car-thawing facility on the eastern seaboard. It is comprised of a car-thawing shed, which will hold from five to six cars at a time, depending upon the lengths of the cars, and the five previously mentioned outdoor single-car heaters which have been greatly improved.

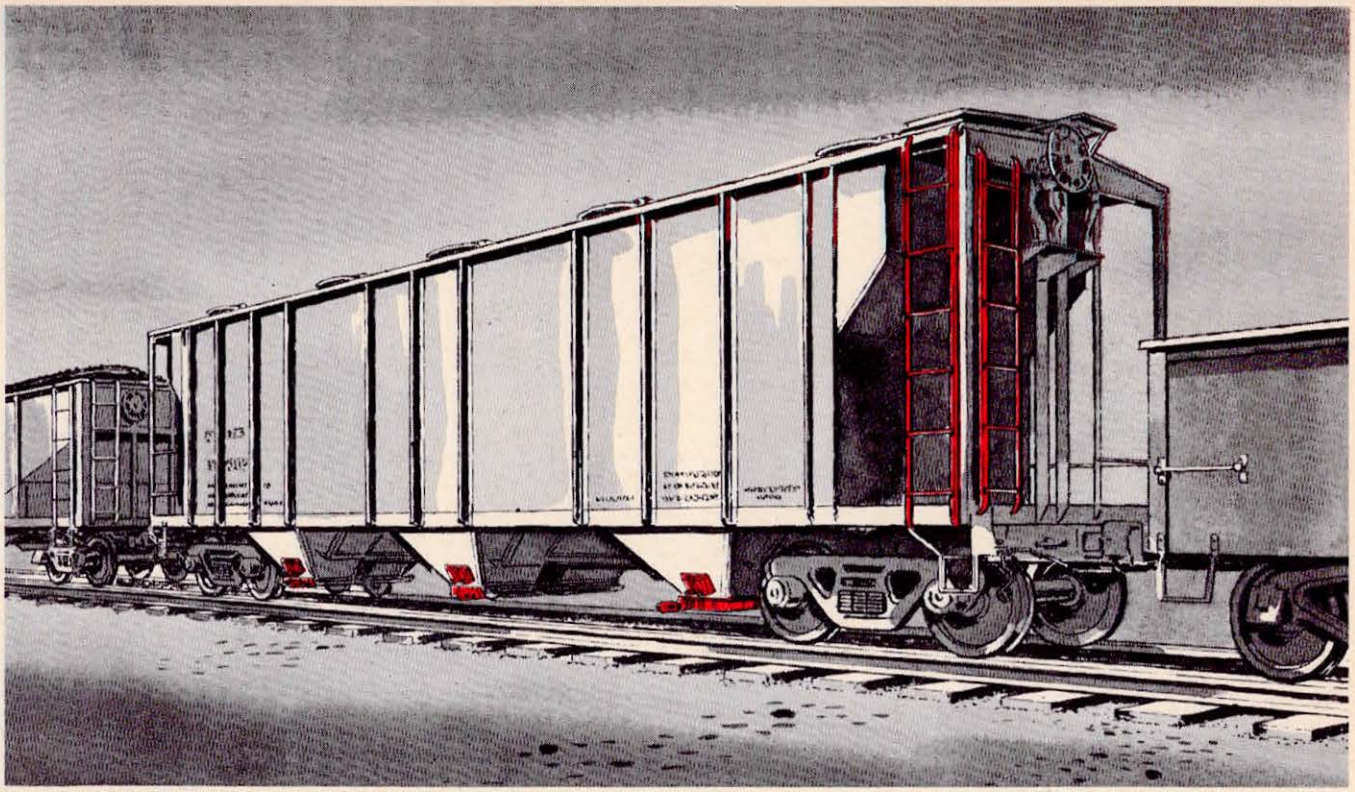
- **Propane gas used.** To melt frozen loadings, a large amount of heat is necessary. The car-thawing shed, tested in December 1963, and put into full operation in January, employs both the convection and radiation methods of heating. Under-car convection heaters are provided between the rails below track level, and infra-red radiation-type side heaters on each wall of the shed. Propane gas is used for the heating source.

The WM considered using electricity for the heating energy and weighed the most of this source against propane gas. Electrical energy could not be justified economically. For one thing, the initial cost of providing a supply line for twice the power now being used, as well as the installation of the electric heaters, would be expensive. Also, the demand charges for the electrical power would be excessive for the short thawing season it would be required. Furthermore, although the thawing season normally extends from December 1 to March 31, cars have to be thawed for

(Continued on page 86)



Outdoor heaters supplement thawing-shed work. Five tracks, each with single-car spot, have infrared side heaters mounted on windbreaks and under-car heaters.



Colored Sections of Illustration Show the Wine Vibrator Brackets, Power Geared Discharge Gates and Ladders.

IF YOUR COMPANY BUILDS OR REPAIRS FREIGHT CARS

. . . if they depend on you for quality railway appliances at the right time and the right price, better get in touch with WINE . . . a major supplier to the car building industry and railroads since 1912, and a source you can confidently depend on! For fast action, see your local Wine sales representative or contact the factory in Toledo.

GEARED TO PROGRESS P I MEMBER

WINE RAILWAY APPLIANCES

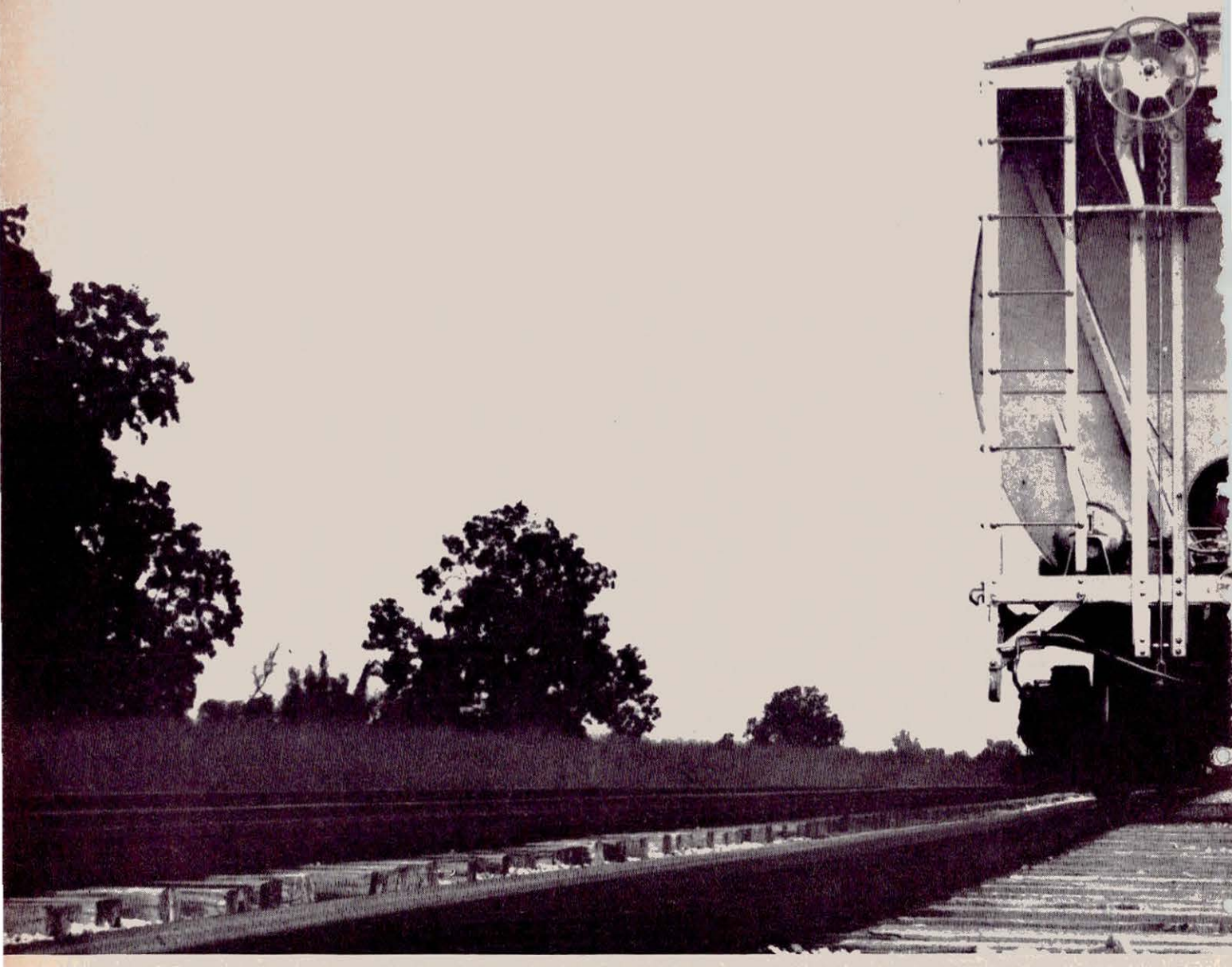
THE WINE RAILWAY APPLIANCE CO.

DIVISION OF UNITCAST CORPORATION • TOLEDO, OHIO 43609

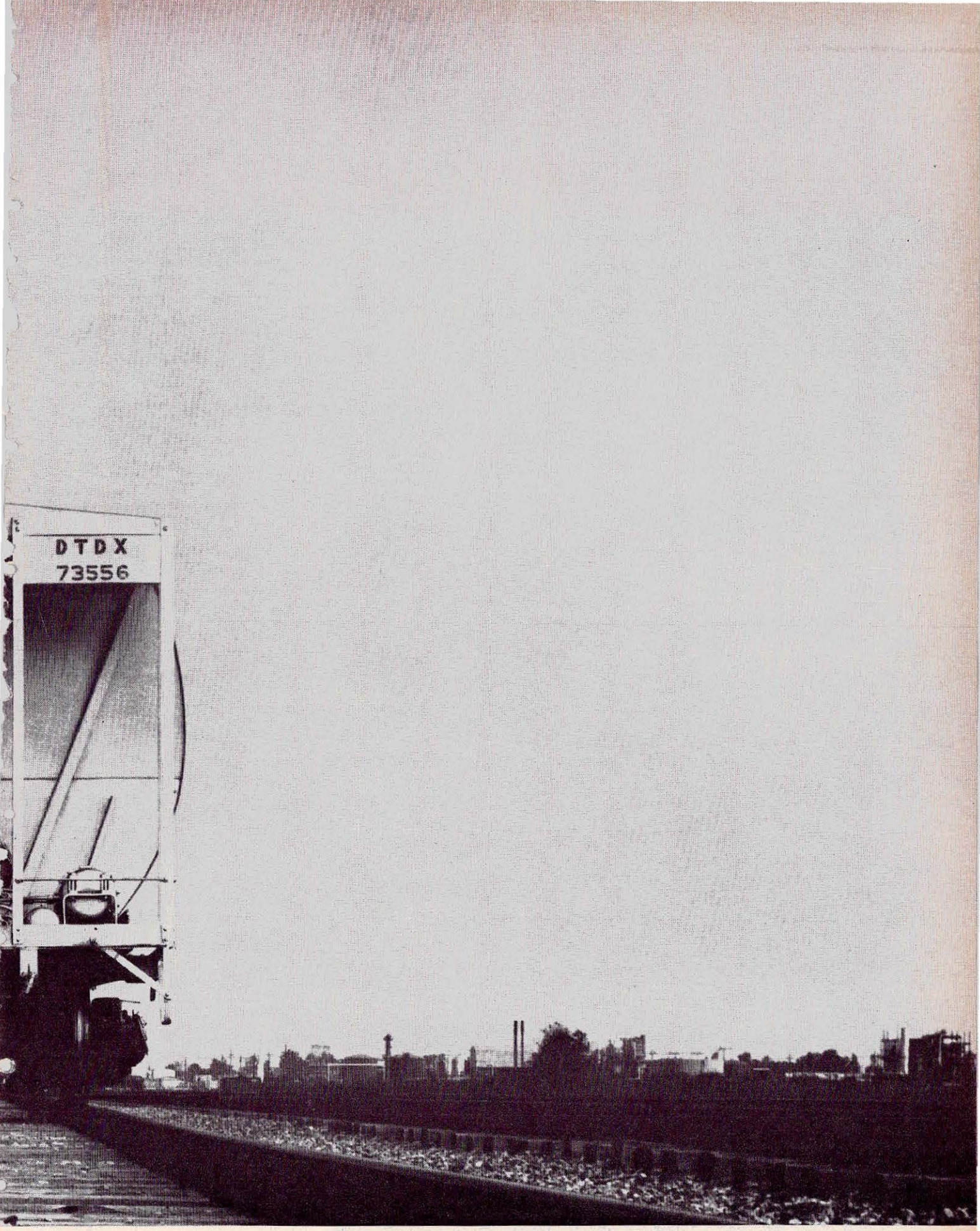
Canadian Manufacturing Division: *Canadian Unitcast, Ltd.*, Sherbrooke

Sales and Service: *The Holden Co., Ltd.*, 614 St. James St., W., Montreal

Wine appliances include: Hopper Frames, Hinges and Door Locks • Discharge Gates • Drop End Locks • Drop End Balancers • Drop Bottom Balancers • Brake Balancers • Single and Double Roller Side Bearings • Lading Band Anchors, Fixed and Swivel • Vibrator Brackets • Interlock Pinless Hinges • Ladders • Grab Irons and Hand-Holds • Miscellaneous Car Castings • You can also depend on Wine for prompt delivery of spare parts.

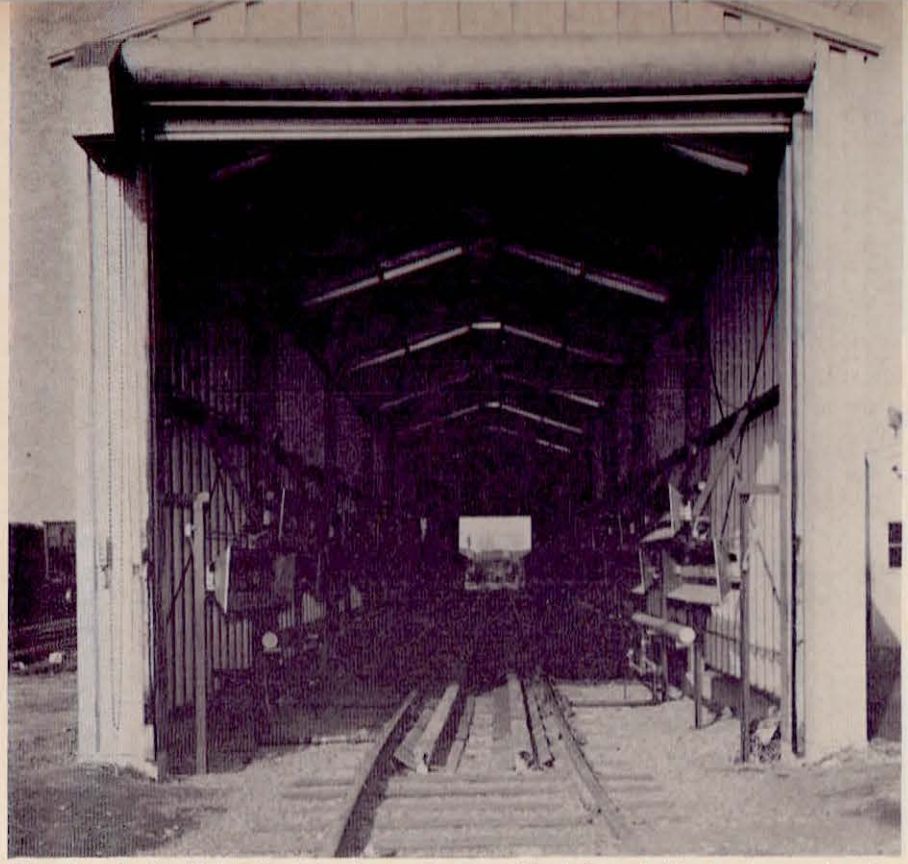


Next thing you know, our aluminum will be carrying people. In fact, we have a design for an aluminum suburban car right now. But mostly our aluminum sheet, plate and extrusions move freight. We worked with Alcan and Greenville on this aluminum tank



hopper car. We worked with Sparton on their new aluminum dunnage bar. We're working on an aluminum freight car roof. Can we work on anything for you? The Dow Metal Products Company, Division of The Dow Chemical Company, Midland, Michigan.

DOW



Thawing shed will handle 5 to 6 cars at once. The infrared side heaters and under-car convection-type heaters are lit and operated from outside control panel.

Car thawer speeds coal-dock dumping

A modern car-thawing facility enabled the Western Maryland to raise its car-dumping operations from 3 to 15 cars per hour.

The Western Maryland is known as a coal road. Normally, from 35% to 40% of its revenue is derived from handling coal between mines and ships. The road con'inues to increase this traffic by constantly improving its operations and facilities.

- **Quick turnaround is basic.** Many of these improvements have been made at the road's coal pier at Port Covington, Md. This is because the WM believes that improvements which promote faster ship loading are important factors in attracting new business and in holding present business. The road is aware that, because it costs from $600 to $3,000 per day to have a ship tied up, coal exporters have a habit of seeking dock facilities where a quick turnaround is possible.

Recent improvements made by the road at Port Covington include two-trick operation, the deepening of the main and access channels for accommodating colliers of deeper draft, provision of additional areas for ground coal storage, and the installation of a new cross conveyor and belt feeder for easier coal blending and faster loading. The most recent improvement made at this location is the expansion of the car-thawing facilities.

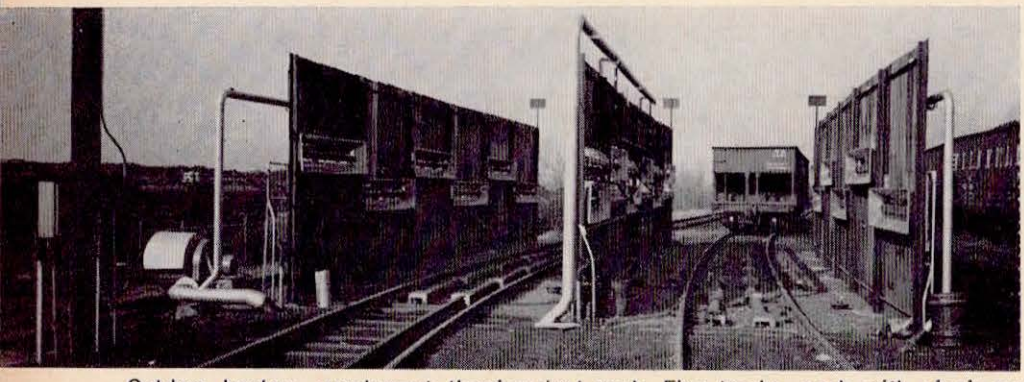
- **Five times faster.** The expanded thawing facilities now permit from 15 to 20 loaded cars to be thawed per hour, compared with an average of three cars per hour by the former facilities. The latter consisted of under-car heaters placed on five tracks in advance of the barney pit. The heaters, operated by natural gas, were long enough to heat one car on each track and were protected by windbreaks erected between tracks and on the outside of the outer tracks. This arrangement was not entirely satisfactory because much of the heat was blown away and lost. It was possible on days of high-velocity winds for only six cars to be thawed in one day.

The Western Maryland believes it now has the most efficient car-thawing facility on the eastern seaboard. It is comprised of a car-thawing shed, which will hold from five to six cars at a time, depending upon the lengths of the cars, and the five previously mentioned outdoor single-car heaters which have been greatly improved.

- **Propane gas used.** To melt frozen loadings, a large amount of heat is necessary. The car-thawing shed, tested in December 1963, and put into full operation in January, employs both the convection and radiation methods of heating. Under-car convection heaters are provided between the rails below track level, and infra-red radiation-type side heaters on each wall of the shed. Propane gas is used for the heating source.

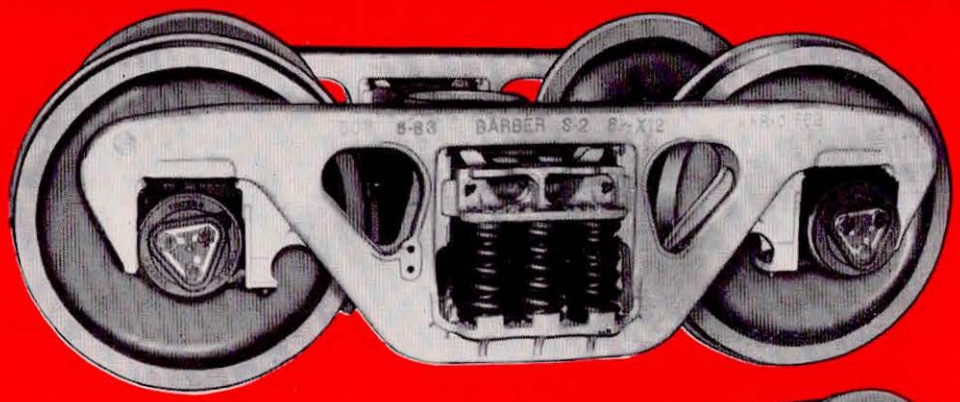
The WM considered using electricity for the heating energy and weighed the most of this source against propane gas. Electrical energy could not be justified economically. For one thing, the initial cost of providing a supply line for twice the power now being used, as well as the installation of the electric heaters, would be expensive. Also, the demand charges for the electrical power would be excessive for the short thawing season it would be required. Furthermore, although the thawing season normally extends from December 1 to March 31, cars have to be thawed for

(Continued on page 86)

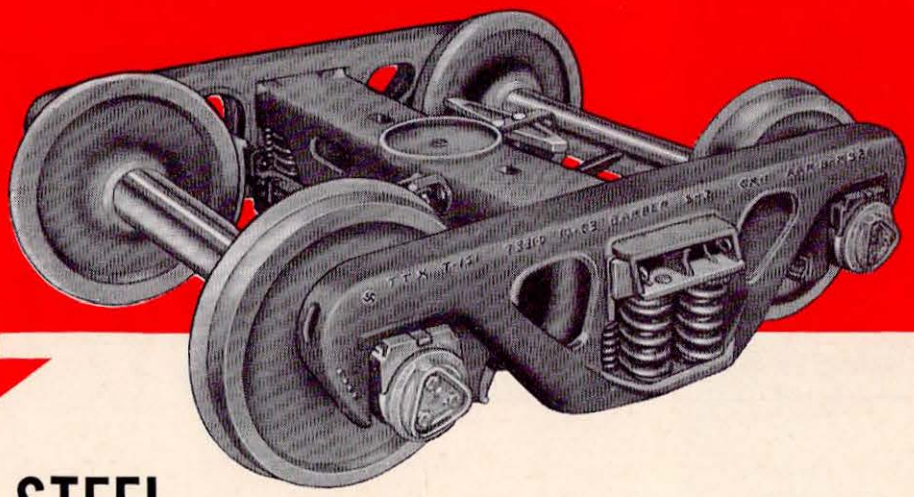


Outdoor heaters supplement thawing-shed work. Five tracks, each with single-car spot, have infrared side heaters mounted on windbreaks and under-car heaters.

ENGINEERING



Light Weight,
Hi-Tensile
Heavy-Duty
(100 ton) Truck



Special Low
Conveyance
28" Wheel
Barber Truck

by SCULLIN STEEL

Scullin skill in engineering and design, gained through over 60 years of experience in the production of highest quality freight car castings, is evidenced again in these modern trucks equipped with Scullin side frames and bolsters.

Designed and built to railroad or car builder requirements, these trucks are performing with complete satisfaction in the most exacting types of service.

Bring your special (or conventional) problems to Scullin—our skills in design, engineering, research and development will serve you well.

SCULLIN STEEL CO.

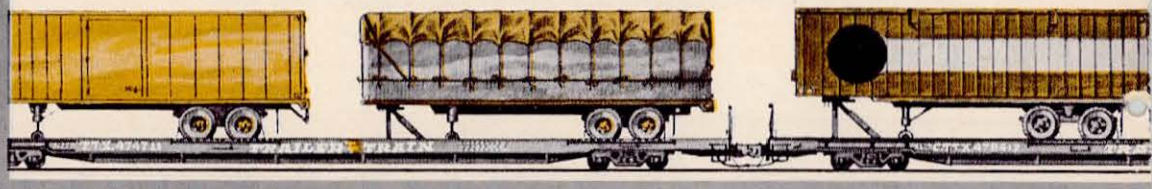
A Division of Universal Marion Corporation

Main Office & Works: 6700 Manchester Avenue St. Louis, Mo., 63139

SALES OFFICES: St. Louis, Missouri 63139 — 6700 Manchester Ave.
Chicago, Illinois 60604 — 332 S. Michigan Ave.
New York, N. Y. 10017 — 420 Lexington Ave.

REPRESENTATIVES: Baltimore, Maryland 21202 — N. S. Kenney Co. — 1815 Munsey Bldg.
Richmond, Virginia 23230 — Samuel P. Goodloe — 3600 W. Broad St.
San Francisco, Calif. 94124 — J. C. Fennelly Co. — 1485 Bayshore Blvd.

THE MOVING FORCES IN PIGGYBACK

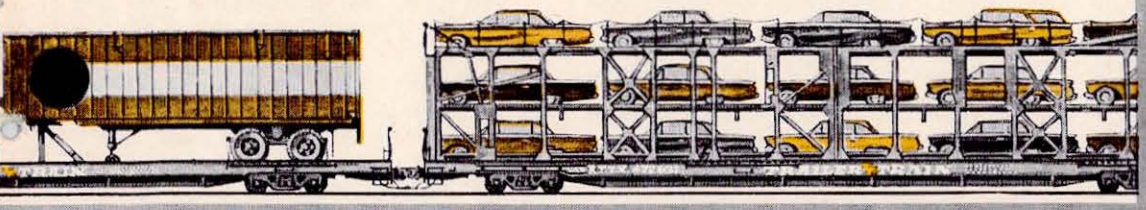


TRAILER TRAIN

and its 41 member owners

PLUS THESE ASSOCIATED CLASS I RAILROADS

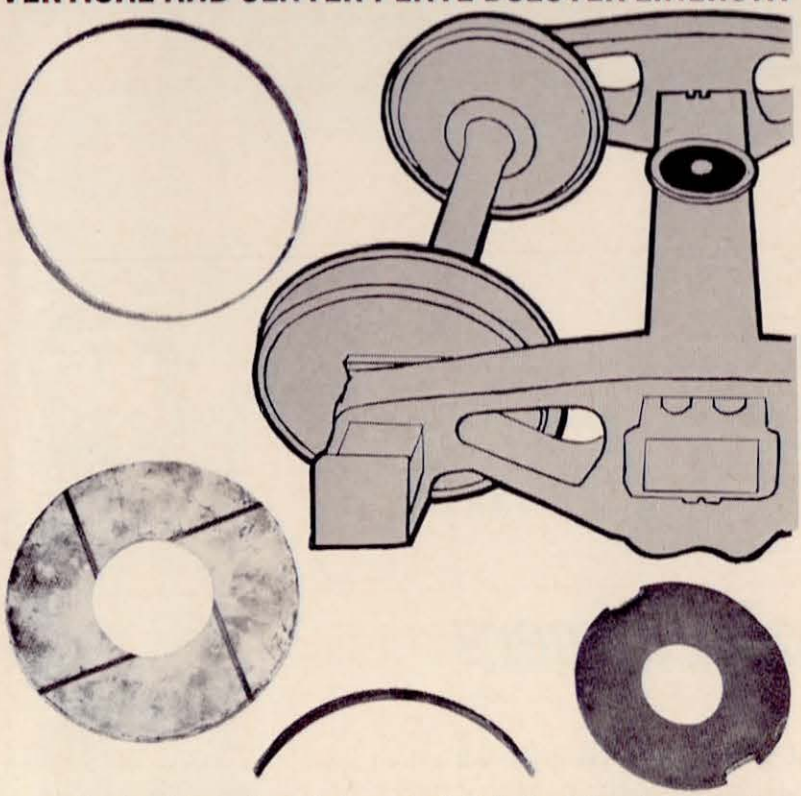
Abilene & Southern Railway Company
Alabama, Tennessee and Northern Railway Company
The Ann Arbor Railroad Company
Atlanta & West Point Railroad Company
Clinchfield Railroad Company
The Colorado and Southern Railway Company
The Denison and Pacific Suburban Railway Company
Fort Worth and Denver Railway Company
Georgia Railroad
Gulf, Colorado and Santa Fe Railroad Company
Lehigh Valley Railroad Company
Louisiana & Arkansas Railway Company
Northwestern Pacific Railroad Company
Pacific Electric Railway Company
Panhandle and Santa Fe Railway Company
The Pittsburgh and Lake Erie Railroad Company
Quanah, Acme & Pacific Railway Company
St. Louis, San Francisco and Texas Railway Company
Savannah & Atlanta Railway Company
Texas & New Orleans Railroad Company
Texas-New Mexico Railway Company
Texas Short Line Railway Company
The Toronto, Hamilton & Buffalo Railway Company
The Western Railway of Alabama



Rock Island
"Follow the Flag" WABASH
Nickel Plate Road
Detroit Toledo Ironton Railroad
ERIE – LACKAWANNA
New York Central System
PRR
Atlantic Coast Line — Virginia · North Carolina · South Carolina · Georgia · Florida · Alabama
Reading Lines
B&O — Linking 13 Great States With The Nation
Central of Georgia
Florida East Coast Railway
L&N — Louisville & Nashville R.R. — Dixie Line
C and O For Progress
GM&O
Seaboard Air Line Railroad — Through the Heart of the South
WM — Western Maryland Railway
N&W Railway
RF&P — Richmond, Fredericksburg and Potomac Railroad

THE HARDER IT WORKS . . . THE HARDER IT GETS!

HIGH CARBON 11% TO 14% MANGANESE STEEL VERTICAL AND CENTER PLATE BOLSTER LINERS...



. . . outlast mild steel, stainless steel, T-1 steel, hardened carbon steel, in extra heavy service. ROL-MAN rolled and forged high carbon manganese steel is the wear hardening steel identical in analysis to the original Hadfield steel. It thrives on destructive service, which causes it to continuously work harden. The harder it works . . . the harder it gets. ROL-MAN high carbon manganese steel will provide maximum strength and wear resistance in the most heavily loaded applications—used with or without lubrication. ROL-MAN wear parts, fabricated to your specifications, can be used to modernize **existing** equipment, or can be installed in your **new** equipment. In either case, they give maximum protection against abrasion and shock, extending the useful life of trucks and adjacent parts, and protect the lading itself against road shock. But only a true high carbon (1.1%-1.4%) manganese steel like ROL-MAN provides these important benefits. Specify ROL-MAN high carbon rolled and forged 11% to 14% manganese steel wear parts. Send us your sketch for an immediate quotation.

FREE—Write today for your copy of our new illustrated catalog showing typical ROL-MAN parts fabricated for railroad service.

MANGANESE STEEL FORGE CO.

Richmond St. & Castor Ave.
Philadelphia 34, Pa.

ROL-MAN

Thawer speeds coal dumping

(Continued from page 82)

proper unloading on about only 45 days of this period, but the demand charges for the power would continue.

● **Advantages of propane.** By using propane gas, the railroad avoids charges except for the thawing season. It leases two cars from the supplier, the Suburban Propane Gas Corp., for storing the liquid propane, thus saving the cost of erecting a storage tank. Suburban Propane was helpful in working out a plan whereby the cars are received with full loads and are set out on a nearby storage track. As the propane is depleted in one car, the supplier replenishes the load by truck service. This eliminates the need for switching. At the end of the thawing season, the cars are returned to the supplier and the railroad is given credit for the unused propane.

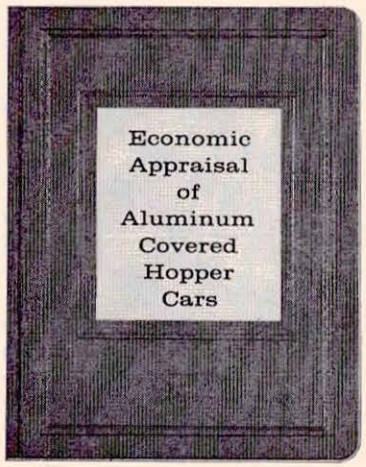
The thawing shed is an Armco Steelox building of rigid-frame construction, 242 feet long and 20 feet wide. It provides 16 feet vertical clearance at the end openings. A motorized steel rolling door is provided at one end to reduce heat loss. A single track, built on prestressed-concrete crossties placed at 36-inch centers, runs through the structure on a 1.8% grade descending toward the barney pit. Running rails of 90-pound section are supported above the ties on steel chairs, 5 inches high, so that the under-car heaters will not project above the top of rails.

● **How it works.** In operation, cars with frozen loads are switched in the yard in a sequence that will produce the proper coal blend in the ship hold. A cut of five cars is set out by the switch engine at the upper track opening of the shed. The brakes are set on two of the cars by car riders who also place asbestos bags, which are reusable, around the air hoses to prevent burning. The cars are then pushed into the thawing shed; thus no car riders go into the building.

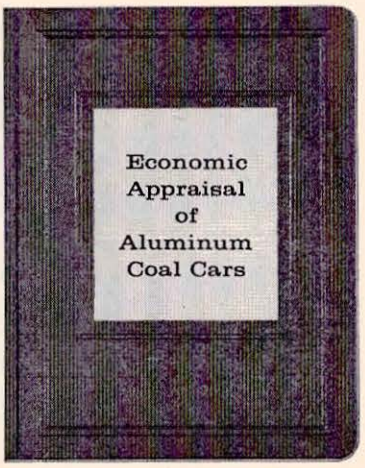
One man is in charge of the thawing operation and he controls the heat from a control panel on the outside of the shed. The building length is divided into five heating zones, the under-car and side heaters in each zone being controlled separately from the panel. If five long cars are within the shed, each car is in a separate heating zone and can be heated by two under-car heaters, positioned inside the running rails, and six heaters on each side. The heating equipment and the controls were developed by the Metal Designing Co.

The total heat output per zone is

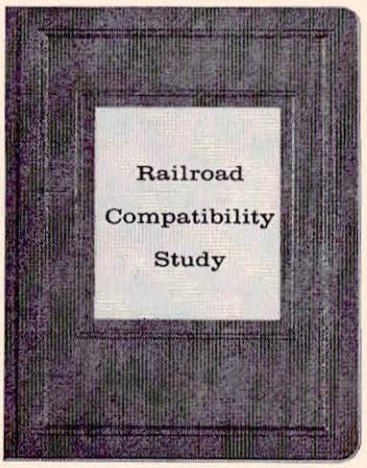
Write for these facts on the economics of aluminum usage in railroad transportation



A complete study of operating costs for covered hopper cars now in service. Includes details on the economies of partially loaded cars and tables illustrating the economies of assigned runs.



A detailed projection of a 10-year mine car usage program indicating savings of $1,148,992 over steel cars in operating costs alone.



A complete tabulation of aluminum's compatibility with over 100 ladings.

Please send me the following booklets:

- ☐ Economic Appraisal of Aluminum Covered Hopper Cars
- ☐ Economic Appraisal of Aluminum Coal Cars
- ☐ Railroad Compatibility Study
- ☐ The Special "Railroad Issue" of Kaiser Aluminum News

NAME _____

FIRM _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

Write To: Kaiser Aluminum, Room 846, 300 Lakeside Drive, Oakland, California 94604

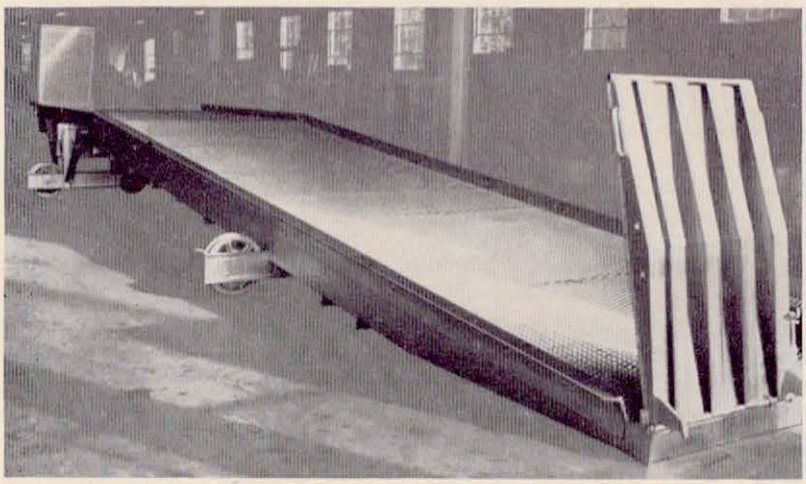
KAISER 50 YEARS

KAISER ALUMINUM

2 new Buck units which will increase your TOFC revenue

"A" frame for unloading trucks shipped saddle style ("saw tooth" method)

10,000# capacity. Handles trucks loaded saddle style on flatcars. Operates from the ground. Mounted on 4 pneumatic rubber tires—2 fixed and 2 swivel with steering tongue for movement around yard. Model ARG is used with any flatcar whether or not it is equipped with inverted rails. Model ACV is available for use with special cars which have inverted "V". Both models can be furnished either with an electric hoist or a 1" square drive for air or electric wrench.



Piggy-back (TOFC) ramps for handling loaded trailers from flatcar to ground.

3 Buck units are available for handling fully-loaded piggy-back trailers. PB-1: rail-mounted with wheels for lateral movement to serve several spurs, especially where flatcars are received with tractor ends of trucks facing away from dock. PB-2: used as a temporary ramp where loading and unloading potential is unknown; easily moved to another location. PB-3: portable, rubber-tired unit; can be transported around yard or over the highway with an SAE fifth wheel.

BUCK UP!

For information about any of these Buck units, write to Department RR

BUCK EQUIPMENT CORPORATION

720 Anderson Ferry Road • Cincinnati, Ohio 45238

Phone: Area Code 513—471-8580

six million Btu's per car per hour, distributed one million Btu's on each side and four million under the car. This output can be varied as desired between full output and two-thirds of the total output. This flexibility in output is necessary to adjust the heat to weather conditions, as well as for the time that the ship loader is moving from one hold to another or when loading is discontinued to permit coal-blend sampling and testing.

• **Interlocked controls.** The controls are designed so that they "fail safe." The propane is pumped from the cars to a fenced-in vaporizing station between the cars and the thawing shed. A blower near the control panel sucks the correct proportion of gas from the supply line through a venturi and forces it into the burners. The blowers must begin operation before the gas can be turned on and the blowers cannot be turned on until the gas reaches a sufficient pressure. The blowers are interlocked. If the gas pressure falls below the desired level, the blowers are inoperative and the gas valves remain closed until the pressure is built up.

After being turned on, the sparking must ignite the gas within a period of one minute or the valves close to prevent the gas from being expelled and presenting a hazard. After the starting button on the control panel is depressed, other buttons on the control panel light up for each heater.

• **Heat 'soaks' in.** After a cut of cars has been heated sufficiently for easy dumping, a second cut of cars is used to push the first one out of the shed. The first cut remains where pushed for a time to permit "soaking" of the heat throughout the load for uniform thawing. Car riders then uncouple cars one by one from the cut as desired for blending and the cars roll by gravity to the barney pit, where they are picked up by the barney and carried up an incline to a car dumper.

The dumping determines the amount of time that a cut of cars is allowed to remain in the thawing shed. If the loads dump without large chunks of frozen coal remaining on the hopper grillage, the barney operator so advises the operator of the thawing shed by telephone so he can reduce the heat period for optimum requirements. When large lumps of frozen coal show up in the car-dumper hopper, men are sent into the hopper to break them up.

The thawing shed is being supplemented by the outdoor heaters. In January 1964 new windbreaks with side heaters using propane gas were added at this location. Presently, the under-car heaters use natural gas as the heat source. However, these are being converted to use propane gas to reduce operating costs of infra-red heating, which is not dissipated by winds. ■

N&W moves toward new high in '64

The phrasing was conservative: stockholders gathered in Roanoke for the Norfolk & Western annual meeting heard N&W President Herman H. Pevler predict that 1964 will show a "solid improvement" over N&W's 1963 showing. But 1963 was the best year in the road's history, and with a traditionally strong profit-maker like the N&W, this prediction may turn out to be an understatement.

One officer after another rose to describe the prowess of the N&W in '63: Hamilton M. Redman, vice president—finance said that record earnings of $68 million on operating revenues of $267 million made the N&W the nation's number one earner from railroad operations. He reported that total working capital on Mar. 31, 1964 was $85.4 million and at the beginning of last week cash and temporary investment came to $112 million.

Earnings per share in 1963 were 122% ahead of 1954—a growth rate per share for ten years of 12% a year as an arithmetical average and 8.3% compounded.

Harry C. Wyatt, senior vice president, added that N&W planned to spend about $57 million this year for new and improved equipment and facilities. He emphasized that N&W's 55.9% operating ratio in 1963 was by far the lowest of any sizeable road in the country, and tacked on a prediction that the 1963 all-time high of 99,000 gross ton miles per train hour would be topped this year.

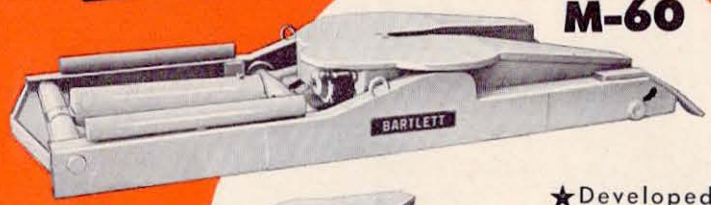
● **Coal traffic up.** Norfolk & Western places big emphasis on coal movement, and C. P. Blair, vice president—coal traffic and development, announced that N&W coal tonnage so far this year was 11% ahead of the comparable period in '63, and that the future "looks bright."

He gave one example: a new generating unit of Carolina Power & Light is scheduled to go on-line in April 1966. Unit trains will almost certainly be used to move the nearly one million tons of coal it will consume each year, he said, and an even larger second power unit is under consideration for completion two years later.

Similar optimism was registered by Robert N. Woodall, vice president—traffic, in describing the "remarkable growth" of automobile and piggyback traffic. ■

BARTLETT
"PIGGY-BACK"
HYDRAULIC 5th WHEEL
HAS FULL 14" LIFT TO CLEAR RAMPS
AND RAILROAD CAR STANCHION OBSTRUCTION

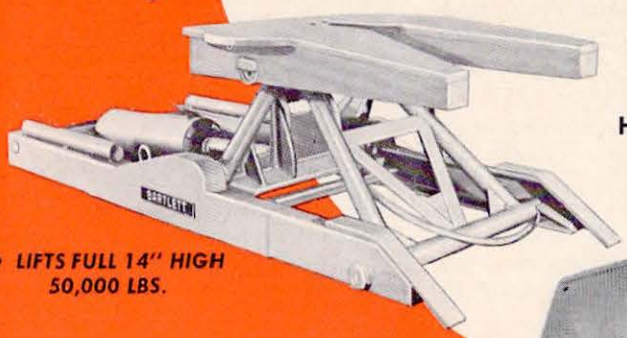
M-60



• HEAVY 5th WHEEL AND LOCKING JAWS

• LOAD NOT CARRIED ON CYLINDER

★Developed for Beam Railroad Cars 80' long — Up to 100 spots per day. Fifth Wheel comes complete with P.T.O., pump and jaw controls — air or vacuum operated — Extra heavy construction insuring long life. Hundreds in use over ten years resulting in savings of 2/3 in spotting costs. Simplified mounting.



• LIFTS FULL 14" HIGH 50,000 LBS.

More Fleets Use
BARTLETT
HYDRAU. LIFT
5th WHEELS
Than Any Other

Dealers
IN ALL LARGE CITIES

LATEST DEVELOPMENT IN THE BARTLETT LINE...
SNORKLE
14 Ft. 8 In. HYDRAULIC HIGH LIFT
5th WHEEL...

WRITE OR PHONE

BARTLETT TRAILER CORPORATION
6850 W. 63rd ST. . . . CHICAGO, ILL. 60638
AREA CODE 312: 586-8200

TRAILCO offers you a piggyback unit

BUILT TO STAY ON THE JOB

– NOT IN THE SHOP!

—specifically designed and constructed for piggyback service with special emphasis on the inherent characteristics of TOFC operations.

Trailco PB-64 has specially designed components fortified to resist shear loads of great intensity as well as high impact loads of shifting cargo and train acceleration. It's *quality-built* to end your piggyback problems!

The rugged nose section has eight full length 3″ square tubular uprights and 18-gauge Ex-Ten 45 body panels shielded with the *extra protection* of 12-gauge Hi-Ten steel on both corners. Manifest box, air hoses and lighting receptacles are fully recessed.

The upper coupler assembly is *unequalled* in the industry for ruggedness and durability. Trailco's PB-64 eliminates the loose king pin and king pin plate problems so common on most other makes!

There's *extra protection* inside, too –12-gauge Hi-Ten steel corner panels and full height ¾″ plywood overlay!

Husky landing gear has lateral support over five main frame cross members and it's *guaranteed* for 90,000-lb. shock loads. Full length longitudinals are tied to each cross member with high tensile steel sill mounting gussets.

Rear doors, with no exposed edges, are *full 1″ thick* plymetal with king size high tensile steel hinges. They're recessed in a 3/16″ thick, *specially designed* high tensile steel jamb assembly. Four sturdy anti-rack door locks, with extra intermediate supports, are standard specifications on the Trailco PB-64.

How did all this come about? Trailco is an old line manufacturer —*since 1936*—with a reputation for *more "bonus features"* as standard specs. Personal interviews with piggyback users revealed many shortcomings in existing competitive offerings. Trailco carefully studied these findings and researched piggyback requirements, then applied its design and engineering, its experience and manufacturing skills to produce this new piggyback unit.

The Trailco PB-64 is *not* a modified standard van. It costs a little more *initially* than existing makeshift versions, but quickly makes up for it by reducing out-of-operation time and minimizing maintenance and operating costs. There is *no need for "extras"* because extras are all standard equipment.

Ask for a demonstration and *see for yourself* why it has received such amazing acclaim wherever it's been shown. *Ask for* advance specification sheet 644 and full details.

Write Trailco Manufacturing & Sales Co., Hummels Wharf, Penna., or *phone* Area Code 717, 743-1261.

QUALITY SEMI-TRAILERS

TRAILCO

SINCE 1936

LETTERS

Likes new look

Los Angeles, Calif.

To the Editor:

For the "new look" and easier readability in the April 13, 1964 issue of Railway Age—congratulations!

William A. Ryan
Traffic Manager
Sunkist Growers

Keeping informed

Windsor, Conn.

To the Editor:

As the revolution in transportation gains momentum, it is important to be able to study the impact of technological and management changes. The contribution which Railway Age is making to an understanding of these changes through its first-person interviews is commendable.

We of the shipping industry want to keep abreast. Railway Age fulfills our need.

J. Robert Morton
General Traffic Manager
Combustion Engineering, Inc.

June Calendar

American Association of Railroad Superintendents
June 9-11, Hotel Continental, Chicago.

American Society of Training Directors
June 8-12, Fairmont Hotel, San Francisco. Special railroad training conference, June 8.

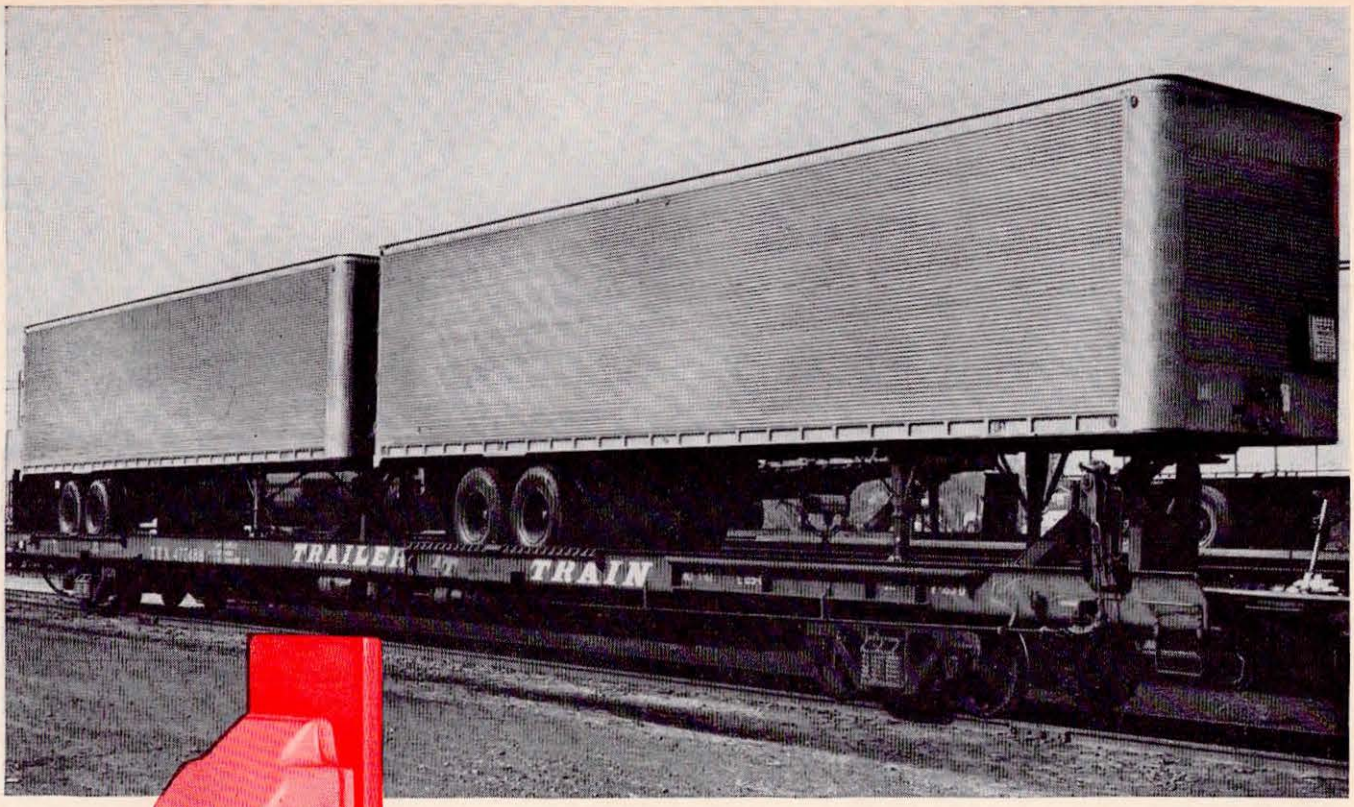
Association of American Railroads Accounting Division:
June 1-3, Chase-Park Plaza Hotel, St. Louis.

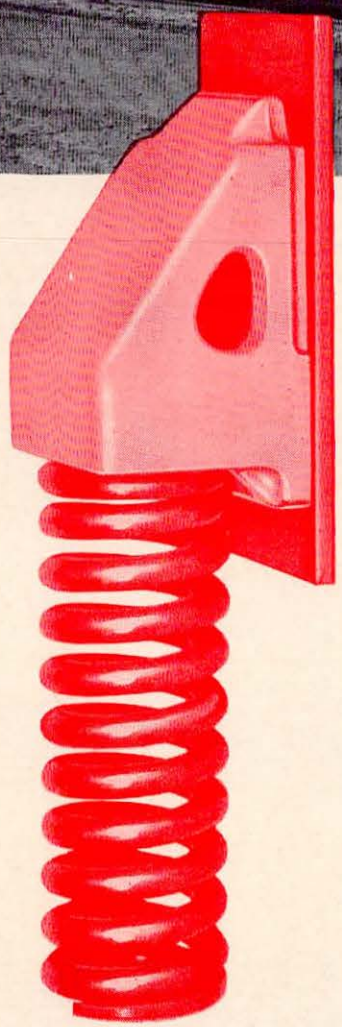
Mechanical Division:
June 23-25, Sherman House, Chicago.

Metropolitan Maintenance of Way Club (New York) Annual outing
June 9, Pennbrook Country Club, Basking Ridge, N.J.

Railroad Public Relations Association
June 18-20, Doral Beach Hotel, Miami Beach.

Railway Systems and Management Association
Automated Information Management Seminar
June 9-11, Knickerbocker Hotel, Chicago.





this and many other

TRAILER TRAIN CARS ride on trucks stabilized by

BARBER!

Today, more and more shippers are turning to Trailer Train Piggyback. Result: increased profits for railroads—greater savings for shippers. Over 3000 Trailer Train Cars ride on trucks stabilized by Barber: an easy-riding device that has demonstrated long life and sound protection of major truck parts. Specify savings—specify Barber!

Standard
CAR TRUCK COMPANY

332 S. Michigan Ave., Chicago, Illinois 60604

BARBER

Manufacturer of
BARBER Stabilized Trucks
and Cushion Systems

Six Penn Center Plaza, Philadelphia, Pennsylvania 19103
Canada: Consolidated Equipment Co., Ltd., Montreal 2, Que.

2302

Pittsburgh roads stage 'fashion show'

The Steel City was treated to a free exhibition of the latest in freight-car designs at the P&LE terminal yard.

A "Railroad Futurama of Progress" was the theme of the exposition sponsored by the Pittsburgh-area railroads in honor of Transportation Week.

For five days, visitors streamed across the Monongahela bridge to the Pittsburgh & Lake Erie freight yards. The big attraction: a chance to see the latest in rolling stock and equipment, much of it never shown before in Pittsburgh.

Guiding spirit for the event was the Railroad Community Relations Committee of the Pittsburgh Railroads, acting in behalf of the Eastern Railroad Presidents Conference.

Free public concerts and guided tours for school children were all part of the campaign: the population of Pittsburgh was being dramatically alerted to the railroads' contribution to progress in transportation.

Pullman-Standard displayed a trough-hatch covered hopper car, a Hydra-frame box car and the "all-door" box car in service on the Southern.

● **Movies in a box car.** Thrall showed an 86-foot six-inch car bearing Wabash insignia. The interior was one of three sites used for continuous showing of color films, including "Science Rides the High Iron," produced by the AAR, and a Union Switch & Signal Division of WABCO film on automatic control systems at work in the railroad industry.

ACF displayed a 32,000-gallon tank car, as well as other pieces of equipment; General American provided three flat cars with piggyback loading demonstrations; REA Express brought a crew from Chicago to demonstrate its containerized operation using flat cars.

Greenville Steel Car, Railway Maintenance Corp., and North American Car also contributed equipment to the exhibition.

The Pennsylvania showed one of the 100-ton hopper cars presently under construction in its Hollidaysburg, Pa., shops, and the B&O exhibited stainless steel passenger cars to promote its "Red Circle Day" fare reduction plan. NYC's jet engine snow blower proved to be one of the big draws.

"A fashion show for the railroads" was how P&LE President John W. Barriger summed up the exposition. Acting as 1964 Chairman of the sponsoring Committee, he turned the P&LE terminal into a huge dining room for an inaugural luncheon, where he singled out promiment Pittsburgh-area railroad officers who helped make the event possible: Richard N. Shields, Pittsburgh & West Virginia president; Morton S. Smith, Pennsylvania vice president; Richard G. Rayburn, B&O general manager; and Richard B. Hood, assistant to the president, Bessemer & Lake Erie. Also present was ICC Commissioner Everett Hutchinson. ■

HIGH TENSILE STEEL HI-CUBE VAN

LOWER OPERATING COSTS!
LONGER TRAILER LIFE!

PROVEN OVER MANY ROAD MILES
AND IN PIGGY BACK SERVICE

Engineering can. . .
. . . Make the difference!

This is a Monon, high tensile steel, hi-cube van designed especially for rough handling and rough service while maintaining a maximum of loading space. It requires a minimum of maintenance and is manufactured with any option or variety of accessories.

PINES TRAILERS — TRIANGLE TRAILERS INC. — **MONON** TRAILERS

2555 S. BLUE ISLAND AVE. • CHICAGO • TELEPHONE 254-5533

(Product Reference 92A)

SLS ST. LOUIS SCREW & BOLT CO.

IS
YOUR

SFS SOURCE FROM STOCK

FOR

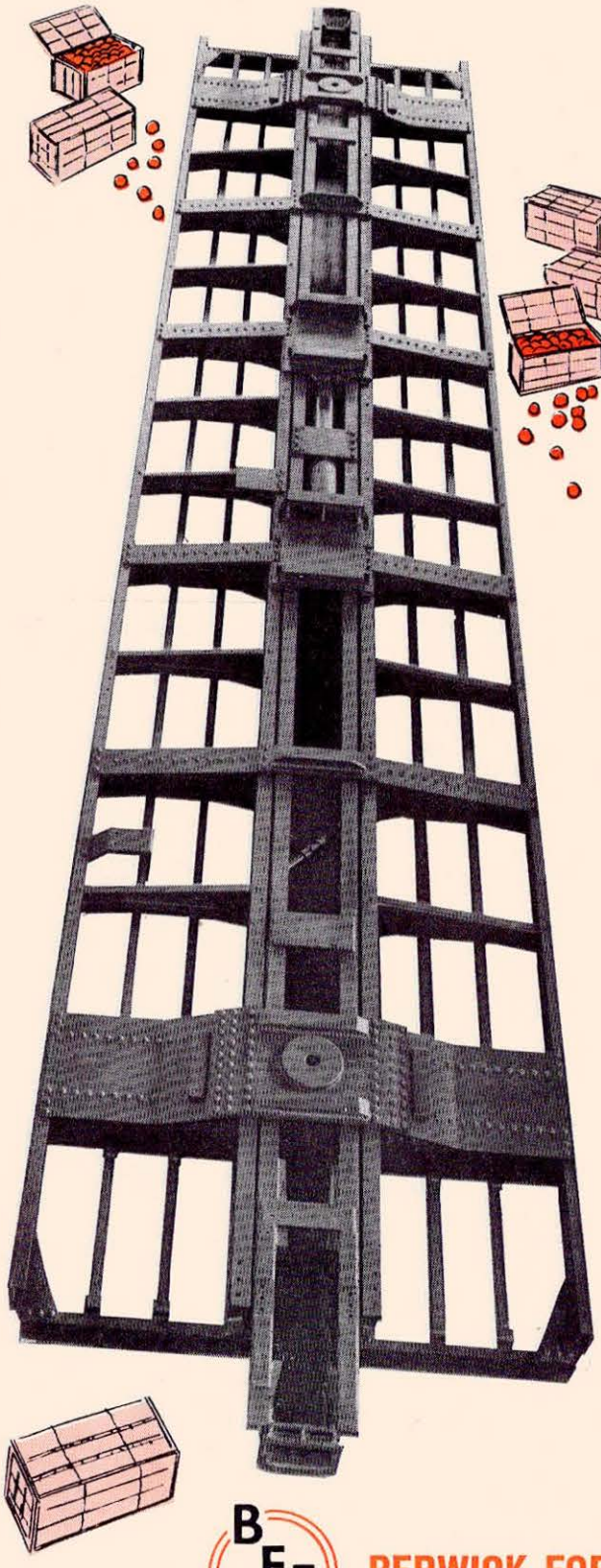
SAE GRADE VIII CAP SCREWS

ST. LOUIS SCREW
& BOLT CO.
6912 NORTH BROADWAY
ST. LOUIS, MO. 63147
Area Code 314 EVergreen 1-0430

(Product Reference 92B)

Fruit Growers Express Co. ordered 630.

How many do you need?



"One of the best underframes we ever received!" was the comment from a spokesman for Fruit Growers Express.

The trial underframe was completed a week ahead of schedule. This delivery (unusual to say the least) plus highest quality construction clinched the order for a total of 630 underframes. We're really proud of that here at Berwick Forge & Fabricating. Hope you don't mind us blowing our horn just a little.

Let us look at your car building or repair problems. Here are a few of the services available to you at Berwick:

Complete car overhauling. Those old cars will be returned to you in jig time just as good as new.

Car lengthening. Berwick will increase the capacity of your 40 footers a big 20-25% by making them 50 footers.

New underframe building. The order for 630 underframes points up the industry's acceptance of Berwick as a major supplier of components.

Immediate delivery on brake rigging parts, draft lugs, friction bearings, grab rails and ladder irons, and other miscellaneous railroad forgings.

Call or write, we'll be pleased to give you an estimate.

B F F **BERWICK FORGE & FABRICATING CORPORATION**

Berwick, Pennsylvania

Shippers assess piggyback rules

(*Continued from page 43*)

Division (a long and generally enthusiastic user of TOFC service—RA, March 28, 1960, p. 24), raises the question of who will really benefit from the new rules.

"Ex Parte 230," Mr. Daly writes, "beyond reaffirming the decision in Docket No. 32533, does not provide individual shippers with anything not already contained in the earlier decision. On the other hand, it does permit regulated carriers to use Plan III, formerly an arrangement exclusively for shippers.

"This, in our opinion, results in a situation wherein TOFC, originally put forth as primarily a shipper inducement, now appears to be weighted in favor of the carriers. Individual shippers derive no benefit from Plan I and cannot use it on their own. It is exclusively a motor carrier arrangement. Very few, if any, shippers can use Plan IV, an arrangement tailored particularly for freight forwarders. Motor carriers, however, now have Plans I and III, and forwarders can and do utilize Plans III and IV.

"Carrier utilization of Plans I, III and IV have, so far as we know, never resulted in any rate benefits for individual shippers.

"Therefore, it behooves our shippers to watch carefully, for a few more modifications could well result in all plans redounding to the benefit of carriers only, and with the shipper again holding the bag."

● **Lower rates needed.** Comment of the same general nature comes also from H. F. Hanson, corporate manager of transportation, Brunswick Corp., Chicago.

Mr. Hanson says he is in complete accord with the ICC's findings "as a starting point in the use of this relatively new mode of transport." But he goes on to warn that "there are pitfalls which could possibly deter temporarily its maximum utilization." He lists among these the following:

● The possibility of a "challenge" to the right of the motor industry to use rail service in performing its function as defined in Part II of the Interstate Commerce Act.

● The danger that service might be slowed down as motor carriers entrust more shipments to railroads for underlying transportation. Mr. Hanson explains, for example, that "a trailer from a warehouse in New York to a warehouse in Chicago will stop loading early in the day so it may be taken to the railroad piggyback yard for departure that evening. A similar loss of time in placing the trailer at destination could follow."

● "The number of shippers and receivers who can take advantage of the lower transportation cost from using Plan IV is decidedly limited. Hence, the new rules may prove a boon to motor carriers and railroads, but leave little advantage for any sizeable number of shippers."

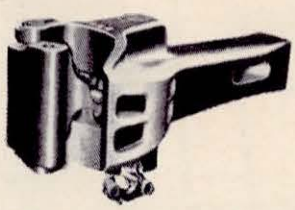
● New rivalry, Mr. Hanson fears, may arise between railroads and motor carriers if both offer the same type of service, but under conditions where it is solely controlled and operated by railroads. "This might mean that rail-billed trailers would be given preference; motor-billed units would be left behind."

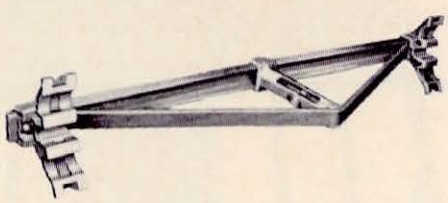
● Use of Plan IV, he suggests, seems quite likely to cut motor carrier costs. It may simultaneously increase railroad earnings, if more trailers move via TOFC. And yet, for the reasons he points out, there may be some sacrifice in service.

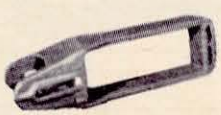
To compensate for this, he concludes, "the shipping public should have a lower line of rates in piggyback, whether the trailer moves under motor carrier or railroad auspices, or by a combination of the two." ■

Thi$ $crabble Will $ave you Dollar$

COMPRESSION TESTED TRUCK SPRINGS
CERTIFIED, REBUILT POWER BRAKES, AAR APPROVED
SAND BLASTED SIDE FRAMES AND BOLSTERS
COUPLERS, TYPE "E" 60, 61 and 63
AAR APPROVED CAST STEEL YOKES
KNUCKLES, ALSO ALL OTHER COUPLER PARTS
DRAFT GEARS, ALL TYPES (MINER, WESTINGHOUSE, ETC.)
REPAIR ALL TYPES RR FREIGHT CARS
EXCELLENT SERVICE AND PROMPT DELIVERY
CAR PARTS SECOND HAND FOR FREIGHT CARS
LOWEST PRICES
ALL PARTS ARE UNCONDITIONALLY GUARANTEED
MODERN SHOP FACILITIES
AIR HOSE, REBUILT WITH NEW HOSE AND TESTED FITTINGS
TESTED ANGLE COCKS AND DIRT COLLECTORS
INSPECTED REGULARLY BY THE AAR
OVEN PYROMETER CONTROLLED
NO ORDERS TOO SMALL OR TOO LARGE







Complete stock lists available quarterly or as requested
Write — phone — or wire

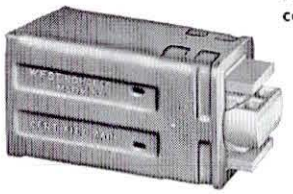
Midland Reclamation Company

5841 Hamilton Avenue, St. Louis, Missouri 63136 • Area code 314 — EV 3-6200

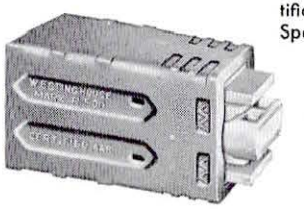
a modern high-capacity Westinghouse gear

. . . FOR EVERY POCKET AND PURPOSE!

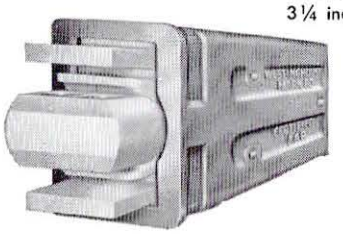
MARK 40 Friction Gear for 24⅝ inch pockets; 3¼ inch travel. A.A.R. Certificate No. 35 A.A.R. Specifications M901



MARK 50 For 24⅝ inch pockets; 3¼ inches travel. Friction principle. A.A.R. Certificate No. 41 A.A.R. Specification M901E



MARK R500 A.A.R. Certificate No. 42; also met A.A.R. Specification M901E Combination friction-rubber, for 24⅝ inch pockets; 3¼ inches travel.



MARK 80 For 36-inch pockets. Extra high capacity friction gear. A.A.R. Certificate No. 37 A.A.R. Specification M901C Has 4¾ inches of travel.

There is a Westinghouse "Mark" High-Capacity Friction Draft Gear to complete your specifications. We recommend an approved and qualified Westinghouse Draft Gear . . . right back of the coupler . . . to absorb INITIAL SHOCKS, protect whatever underframe device you may install, and prevent damage to car structure (reduce maintenance costs!). Also . . . in standard freight cars, Westinghouse Gears alone provide tremendous all around protection!

. . . *and Westinghouse*

DUAL CUSHION *arrangement*

TWO Mark Gears end-to-end back of each coupler! DOUBLE capacity, double protection for car, underframe device and lading. Use combinations of Mark 50-80, Mark R500-80, Mark 80-80; reaction force remains less than 500,000 pounds. A.A.R. Approved.

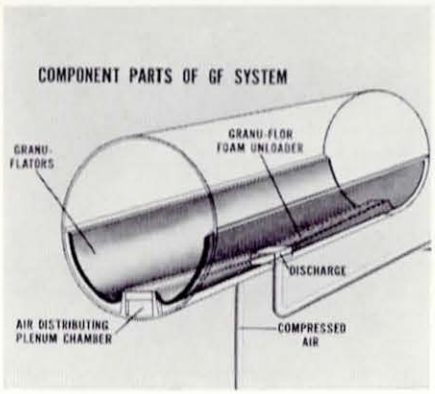
GEARED TO PROGRESS P I MEMBER

CARDWELL WESTINGHOUSE TM

COMPANY

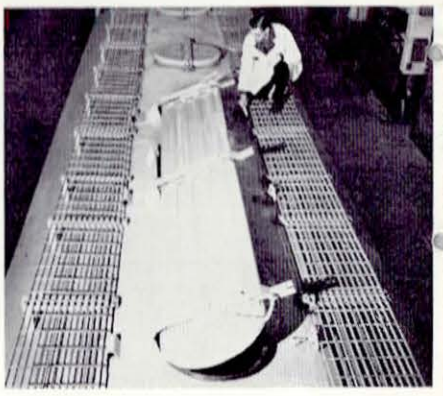
332 S. Michigan Ave., Chicago, Illinois 60604 • Canadian Cardwell Co., Ltd., Montreal 2, Quebec

NEW PRODUCTS REPORT



Air unloader (RA-4)

"Granu-flow" is a newly-developed method for pneumatic unloading of granular or powdered materials. It will be handled by a special department recently established by its manufacturer. The part designated as "Granu-flor" (see illustration) is a sheet of special urethane foam consisting of minute cells with thin elastic walls. When pressure is applied, air passes through these cells. Air piped from an outside compressor or blower into a plenum chamber under the Granu-flor permeates the entire sheet of foam to fluidize lading so it will flow like liquid. The "Granu-flators," high-strength fabric coated with elastomers, are inflated after part of the car's contents has been discharged to deposit any remainder on the Granu-flor for final unloading. Insulation of car exterior above the Granu-flators prevents condensation in ladings which might be damaged by moisture. The new system has been under test for several months by the Pillsbury Company. The inflation breaks up any compacted lading to assure complete discharge. *B. F. Goodrich Co.*



Elongated hatch (RA-5)

A powerful spring automatically assists opening of an elongated loading hatch upon release of tie-down fittings. The hatch, according to the manufacturer, provides maximum loading speed and convenience in handling such bulk materials as grains, feeds, and chemicals. It is available for use on Center Flow bulk-material-handling cars and for the HC series with capacities up to 5,250 cu ft. The hatches are offered as optional equipment in place of standard round type. The hinged-type hatch, which was extensively tested at the ACF Technical Center, extends nearly the entire length of each of the Center Flow car's three or four loading compartments. The separate hatches allow complete separation of commodities for carrying split loads. Covers may be opened simultaneously for faster loading, or one at a time to reduce entry of rain or contaminants during loading operations. Easy closing and sealing, and simplified maintenance or damage repair are other advantages cited. Opening or closing is a one-man operation. *ACF Industries.*

Pad cuts drum leakage (RA-6)

A new pad is said to reduce in-transit leakage from metal drums (and resulting claim costs) by as much as 90%. The 2-inch round, ½-inch thick pad is made from a specially compounded material designed for maximum vibration absorption and durability. A pressure-sensitive adhesive backing holds it to the bottom center of a metal drum, even if the surface is irregular. It works by absorbing transit vibrations which cause metal fatigue and rupture. *3M Company.*

PUT POSTAGE HERE

RAILWAY AGE WEEKLY
30 CHURCH ST.
NEW YORK, N.Y. 10007
READERS' SERVICE DEPT. (Attention George Johnson)

Reprint Order Form

I understand reprints of articles in this issue may be ordered in quantities of 250 or more.

Please quote price on ..... reprints of the article(s) beginning on page(s) .....

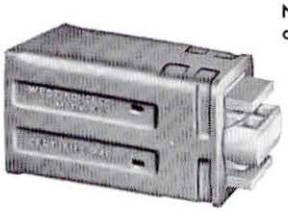
Name .....
Office .....
Home Address .....
City .....
Company .....
Department ..... Title .....

5/25/64

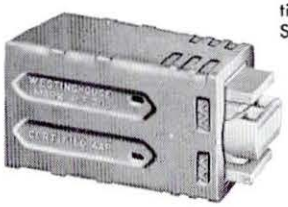
a modern high-capacity Westinghouse gear

. . . FOR EVERY POCKET AND PURPOSE!

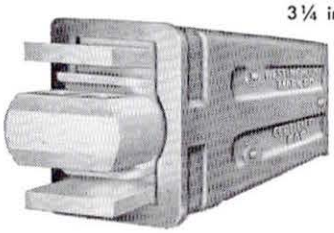
MARK 40 Friction Gear for 24⅝ inch pockets; 3¼ inch travel. A.A.R. Certificate No. 35 A.A.R. Specifications M901



MARK 50 For 24⅝ inch pockets; 3¼ inches travel. Friction principle. A.A.R. Certificate No. 41 A.A.R. Specification M901E



MARK R500 A.A.R. Certificate No. 42; also met A.A.R. Specification M901E Combination friction-rubber, for 24⅝ inch pockets; 3¼ inches travel.



MARK 80 For 36-inch pockets. Extra high capacity friction gear. A.A.R. Certificate No. 37 A.A.R. Specification M901C Has 4¾ inches of travel.

There is a Westinghouse "Mark" High-Capacity Friction Draft Gear to complete your specifications. We recommend an approved and qualified Westinghouse Draft Gear . . . right back of the coupler . . . to absorb INITIAL SHOCKS, protect whatever underframe device you may install, and prevent damage to car structure (reduce maintenance costs!). Also . . . in standard freight cars, Westinghouse Gears alone provide tremendous all around protection!

. . . and Westinghouse

DUAL CUSHION *arrangement*

TWO Mark Gears end-to-end back of each coupler! DOUBLE capacity, double protection for car, underframe device and lading. Use combinations of Mark 50-80, Mark R500-80, Mark 80-80; reaction force remains less than 500,000 pounds. A.A.R. Approved.

GEARED TO PROGRESS
RPI MEMBER

CARDWELL WESTINGHOUSE TM

COMPANY

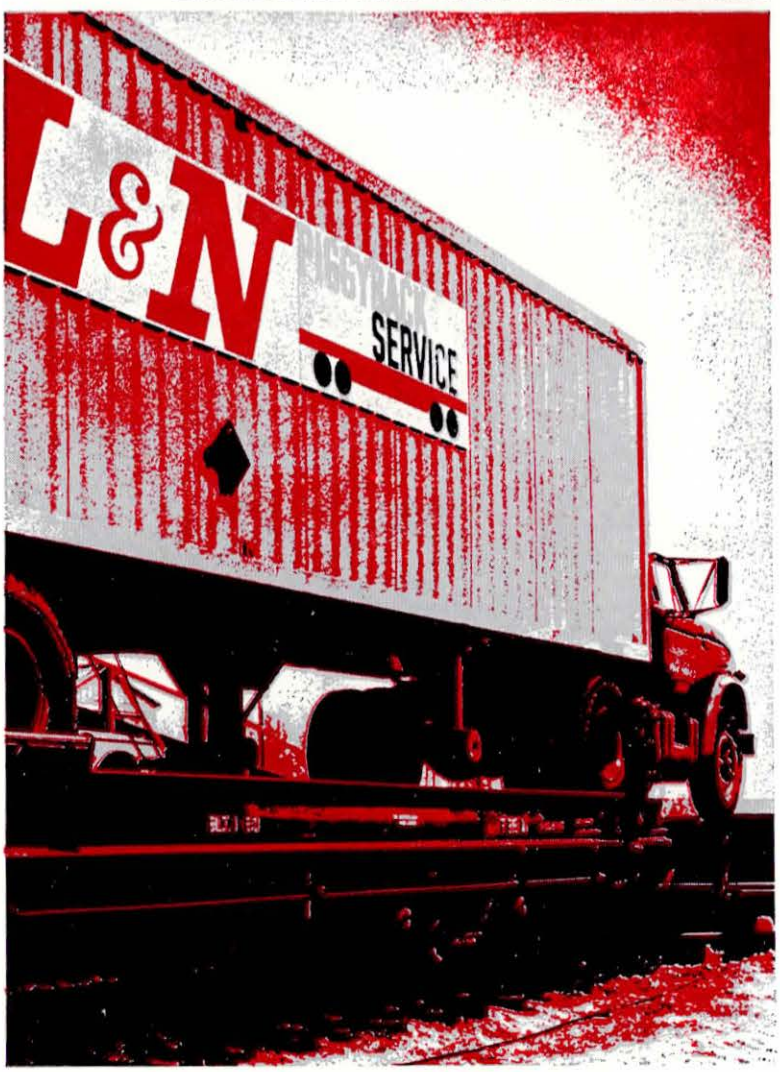
332 S. Michigan Ave., Chicago, Illinois 60604 • Canadian Cardwell Co., Ltd., Montreal 2, Quebec

Lower shipping costs . . . *Ship L&N Piggyback! Get rail-service economy through 34 ramp locations, all 5 piggyback plans.* L&N gives you fast service, too, with four special, all-piggyback trains daily, between the Ohio Valley and the Southeast. Efficient trailer utilization assures availability of equipment that's tailored to your requirements — whether you're shipping plate-glass, watermelons or the entire contents of your plant. And, you can't beat L&N Piggyback service for careful handling.

Ship L&N piggyback, soon. For special shipping problems, call in your L&N Piggyback Representative — he's the expert "problem-solver".

L&N

LOUISVILLE AND NASHVILLE RAILROAD



Contractors do TTX work

(*Continued from page 63*)

a No. 8 vent valve is applied in the trainline.

The car is then placed on the opposite parallel track and moved back through the series of assembly operations. One prime coat and one finish coat of hot spray enamel are applied. The stanchion is lubricated, lowered and stencilled. One coat of anti-skid paint is applied to the deck.

• **ACF procedures.** Operation of the compact Shippers' shop is similar. Before a car enters, trailer hitches are steam cleaned and shop trucks applied. Then the car is moved into the shop and, with hitches chained down, is inverted by the turnover machine. Draft gears and couplers are removed. Center plates, end sills, sill steps and grab irons are inspected and repaired. Decks are stripped for rebuilding and bridge plates are inspected and repaired.

After the car is righted and the hitch elevating screw is covered for protection, the car is sent to sandblast, then moved to one of the assembly tracks where a coat of primer is applied. The trailer hitches are removed, disassembled and overhauled.

In the truck repair area, trucks are completely dismantled. Wheels are restored to contour in the Armourdale wheel shop of the Rock Island at Kansas City. Truck springs are gauged and assembled in sets; the friction shoe well is gauged at the truck bolster, and spring steel wear plates are applied as needed. Where excess wear is found in the truck-bolster center plate, the diameter is increased and a ¼-in. manganese wear ring is applied.

Along the assembly lines, the flooring, riser boards and hitches are applied. The hitch base plate is welded all around to keep moisture from the deck plate. Two finish spray coats of paint are applied, followed by stencilling, in-date testing and inspection.

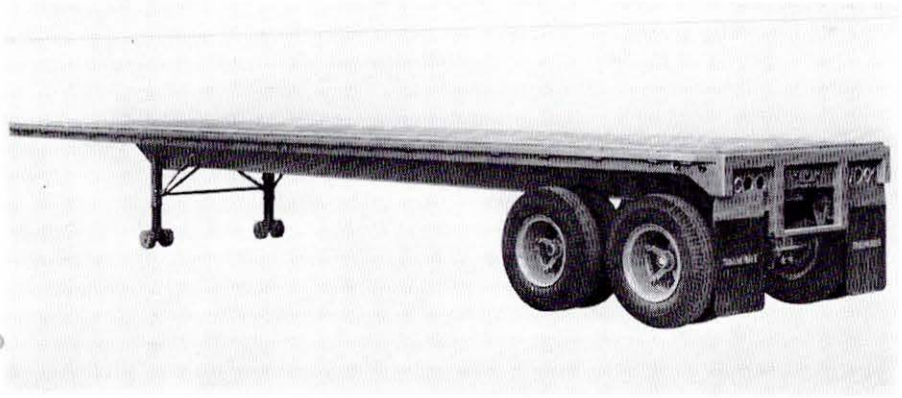
In addition to heavy repairs, all shops have been converting for piggyback service the 85-ft TTX flats from which auto racks have been removed. To fit these cars for handling trailers, they are equipped with hitches, base plates, riser boards and bridge plates.

Over the past three years about 300 75-foot wood-deck flat cars have been converted for shipment of odd size highway vehicles and farm equipment. Some of these cars have tie-down loops installed all along the outside edges of the top of the center sill. Other cars, along with the center-sill loops, have tie-downs on the side sills. ■

NEW PRODUCTS REPORT

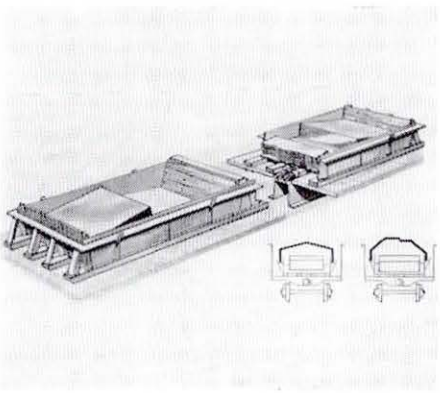
Portable TOFC Ramp (RA-1)

What is said to be Canada's first portable piggyback loading-unloading ramp is now in service on the Canadian Pacific at Sherbrooke, Que. The ramp can be pulled anywhere by a regular highway tractor, or shipped on a rail car like a conventional highway trailer. The ramp's front end can be lowered to or raised from the ground. Length of the ramp is 40 feet; width, eight feet; capacity, 80,000 pounds. *Page & Page Co.*



Heavy-duty Trailers (RA-2)

Two new heavy-duty platform trailers, both certified for piggyback service, are specially designed and built for extra-heavy loads and long life. Both feature interchangeable aluminum side panels that permit quick, easy conversion to open-top units for backhaul versatility. Extra built-in strength permits hauling such heavy commodities as steel, pipe, etc. Trailer fronts, sides and lights are fully protected. *Trailmobile Division of Pullman Inc.*



Steel Skid (RA-3)

The Model S-FB FLatLoad skid, for new or old cars, is said to protect flat bundled sheet from impact damage. Skid and sheets shift together within car and remain under spring-buffer control, traveling as much as 20 in. in either direction. On a 100-ton car two of the 50-ton skids, or one of the 100-ton models, may be installed. Removable type or two-section telescopic hoods may be obtained for the skids. *Shunk Manufacturing Co.*

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS ADVERTISED ON PAGES

2 3 4 6 9 10 13 14-15 16 17-22 23 24-25 26-27 28 29
30 32-33 34 35 36-37 38 39 40-41 42 56-57 58-59 60-61 62
64-65 66 68-69 70 74-75 76-77 79 80-81 83 84-85 86 87 88
89 90 91 92A 92B 93 94 95 96 100-101 102 105 106 109 110

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS DESCRIBED ON PAGES 97 and 98 MARKED

RA-1 RA-2 RA-3 RA-4 RA-5 RA-6

NAME ..... TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

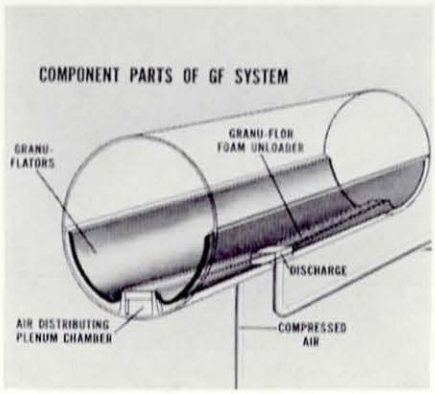
5/25/64

PUT POSTAGE HERE

RAILWAY AGE WEEKLY
30 CHURCH ST.
NEW YORK, N.Y. 10007

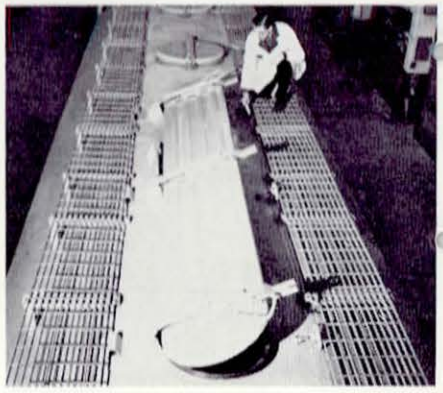
READERS' SERVICE DEPT. (Attention George Johnson)

NEW PRODUCTS REPORT



Air unloader (RA-4)

"Granu-flow" is a newly-developed method for pneumatic unloading of granular or powdered materials. It will be handled by a special department recently established by its manufacturer. The part designated as "Granu-flor" (see illustration) is a sheet of special urethane foam consisting of minute cells with thin elastic walls. When pressure is applied, air passes through these cells. Air piped from an outside compressor or blower into a plenum chamber under the Granu-flor permeates the entire sheet of foam to fluidize lading so it will flow like liquid. The "Granu-flators," high-strength fabric coated with elastomers, are inflated after part of the car's contents has been discharged to deposit any remainder on the Granu-flor for final unloading. Insulation of car exterior above the Granu-flators prevents condensation in ladings which might be damaged by moisture. The new system has been under test for several months by the Pillsbury Company. The inflation breaks up any compacted lading to assure complete discharge. *B. F. Goodrich Co.*



Elongated hatch (RA-5)

A powerful spring automatically assists opening of an elongated loading hatch upon release of tie-down fittings. The hatch, according to the manufacturer, provides maximum loading speed and convenience in handling such bulk materials as grains, feeds, and chemicals. It is available for use on Center Flow bulk-material-handling cars and for the HC series with capacities up to 5,250 cu ft. The hatches are offered as optional equipment in place of standard round type. The hinged-type hatch, which was extensively tested at the ACF Technical Center, extends nearly the entire length of each of the Center Flow car's three or four loading compartments. The separate hatches allow complete separation of commodities for carrying split loads. Covers may be opened simultaneously for faster loading, or one at a time to reduce entry of rain or contaminants during loading operations. Easy closing and sealing, and simplified maintenance or damage repair are other advantages cited. Opening or closing is a one-man operation. *ACF Industries.*

Pad cuts drum leakage (RA-6)

A new pad is said to reduce in-transit leakage from metal drums (and resulting claim costs) by as much as 90%. The 2-inch round, ½-inch thick pad is made from a specially compounded material designed for maximum vibration absorption and durability. A pressure-sensitive adhesive backing holds it to the bottom center of a metal drum, even if the surface is irregular. It works by absorbing transit vibrations which cause metal fatigue and rupture. *3M Company.*

RAILWAY AGE WEEKLY
30 CHURCH ST.
NEW YORK, N.Y. 10007
READERS' SERVICE DEPT. (Attention George Johnston)

PUT POSTAGE HERE

Reprint Order Form

I understand reprints of articles in this issue may be ordered in quantities of 250 or more.
Please quote price on ..... reprints of the article(s) beginning on page(s) .....
.....
Name .....
Office .....
Home Address .....
City .....
Company .....
Department ..... Title .....

5/25/64

Stockholder topics: money and mergers

Rising capital outlays, and new merger talks, dominated optimistic management reports at annual meetings last week.

Merger talk, manpower use and money being spent on capital expenditures continued to dominate the news coming out of railroad annual meetings last week.

Southern Pacific's blockbuster $178-million capital expenditure program for 1964 (see page 7) led a small parade of carriers announcing expanded capital spending programs reflecting the creeping prosperity spelled out in 1963 earnings.

Illinois Central sprung the firmest news in the merger field. IC President Wayne A. Johnston said his road has made a definite per-share offer to Gulf, Mobile & Ohio. Operating and traffic studies are fairly well completed, an IC spokesman indicated. But negotiations were described as in a beginning stage.

Chicago & North Western, weighing new merger talks with Milwaukee even as it prepares for the next round in the fight for control of Rock Island, plans to invite other "smaller" midwestern railroads to join merger discussions aimed at what C&NW Chairman Ben W. Heineman calls a "broad midwestern system" essential to the health of railroads. "It is our purpose," he said, "to pursue that objective vigorously." C&NW's first quarter results were the best since 1945.

Illinois Central Industries, announcing $34 million in capital expenditures for IC, reported progress in pursuing diversification proposals but declined to specify what moves are ahead as the company strives to increase earnings from interests in areas outside of railroad operations.

Chicago Great Western's Chairman and President E. T. Reidy told stockholders that CGW has held informal talks with several railroads on possible mergers and is now conducting a traffic study with another midwestern carrier.

● **Customer orientation.** SP's President Donald J. Russell told stockholders that SP's record outlay was based on customer needs, "to stay ahead of customer requirements in the competitive transportation field." Mr. Russell also commented on the need to repeal state excess-crew laws so that railroads in states having such laws can implement the national arbitration award effective in other states. "These antiquated laws make a mockery of the national settlements of the railroad work-rules issue. In most of the country, freight-train crews are being adjusted to modern technology, under a liberal attrition formula which keeps most present firemen working until they leave the service for natural causes," said Mr. Russell.

● **In the black.** C&NW stockholders were treated to a rosy view of company performance from the road's top management. First-quarter results cited by C&NW President Clyde Fitzpatrick were the best since 1945—a net of $440,000 against a loss of $1.7 million for the first quarter of last year. A wide range of improvement in C&NW's interests, ranging from traffic, suburban operations, property taxation, industrial development, real estate developments and equipment hire costs was reported.

Capital expenditures of $34 million, said Chairman Heineman, will go largely for specialized freight-car equipment.

Best news of all for the stockholders was the announcement that C&NW's board declared two quarterly dividends of $1.25 per share each and that the directors will consider a common-stock dividend next fall.

● **Cash and carry.** Illinois Central President Wayne A. Johnston told stockholders that IC's 1964 $27.2 million equipment expenditures will bring 14 diesel locomotives, 2,227 freight cars to the railroad. "Our plans are to pay cash for all of this," noted Mr. Johnston. IC also plans to spend $6.8 million for road improvements. Mr. Johnston also reported a rise in net income the first quarter of this year, $2.53 million against $2.07 million for the first quarter of last year.

Mr. Johnston told stockholders that IC abolished 250 firemen jobs May 7 and that 50 firemen jobs will have been abolished by the end of the year; "Thereafter, attrition, over a period of several years, should result in abolishment of another 500 jobs." Though reductions are offset by dismissal compensation, Mr. Johnston estimated ultimate reduction in payroll expense "should amount to some $6 million annually."

Incentive rates: big payoff for the SP

The new spirit of ingenuity that seems to be spreading in the railroad industry has helped the railroads to "accomplish the most dramatic and far-reaching service improvements in our history," says B. F. Biaggini, executive vice president, Southern Pacific.

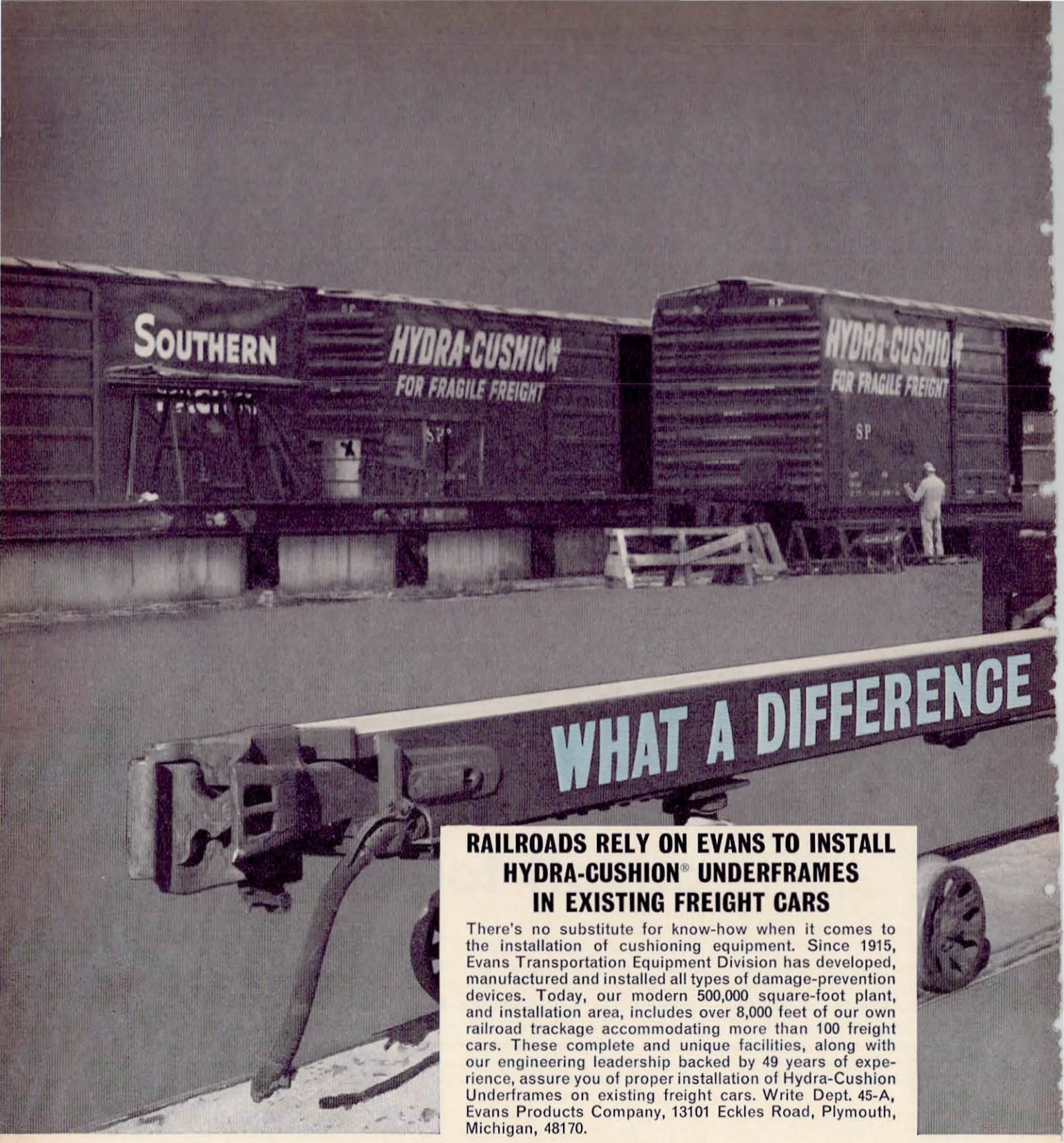
And the key to such achievements. he believes, is the continuing efforts to cut costs—to find new ways of doing the job cheaper and better.

"One of our major efforts to increase efficiency has been in encouraging shippers to load cars more heavily, so as to produce higher per-car earnings and better equipment utilization. Southern Pacific took the leadership in this, a few years ago, by pioneering the present wide-spread use of incentive rates—offering the shipper a lower rate per hundred pounds if he loads a car to certain minimum weights."

The SP executive said the big advantage in this is that it takes fewer cars to handle the traffic and, in effect, expands the car supply. The lower rates, in turn, improve the railroad's competitive position, attracting more business back to the railroad.

Example: SP regained 21,000 cars of lumber in the first year it applied incentive rates to the coastwise movement of forest products. Today, more than 60% of the road's fresh vegetables and melon traffic moves under incentive rates. The railroad estimates that, as a result, it can handle the traffic with 26,000 fewer refrigerator car per year.

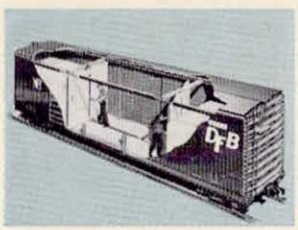
● **Posting that profit.** Finding ways to reduce costs, Mr. Biaggini maintains, is the fundamental challenge because "we have to do this to produce the profit that will keep us in business. And we have to do it to maintain reasonable rates which will help our customers meet their own new competitive problems so that they can continue to afford to be our customers."



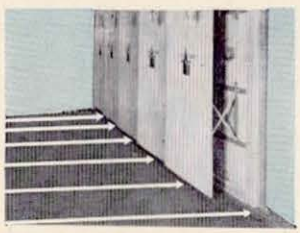
RAILROADS RELY ON EVANS TO INSTALL HYDRA-CUSHION® UNDERFRAMES IN EXISTING FREIGHT CARS

There's no substitute for know-how when it comes to the installation of cushioning equipment. Since 1915, Evans Transportation Equipment Division has developed, manufactured and installed all types of damage-prevention devices. Today, our modern 500,000 square-foot plant, and installation area, includes over 8,000 feet of our own railroad trackage accommodating more than 100 freight cars. These complete and unique facilities, along with our engineering leadership backed by 49 years of experience, assure you of proper installation of Hydra-Cushion Underframes on existing freight cars. Write Dept. 45-A, Evans Products Company, 13101 Eckles Road, Plymouth, Michigan, 48170.

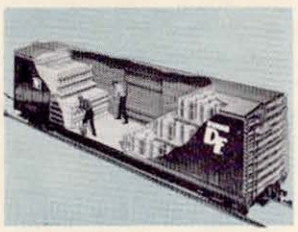
85 CARRIERS OWN OVER 122,000 FREIGHT CARS EQUIPPED WITH DAMAGE-PREVENTION DEVICES DEVELOPED, MANUFACTURED AND INSTALLED BY EVANS PRODUCTS COMPANY



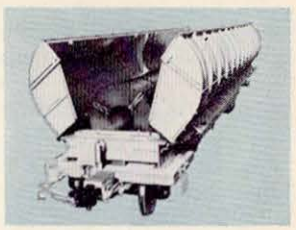
EVANS DF-B one-piece bulkhead equipment is today's most popular way to brace unitized lading. Easily operated by one man, it prevents damage to lading in transit.



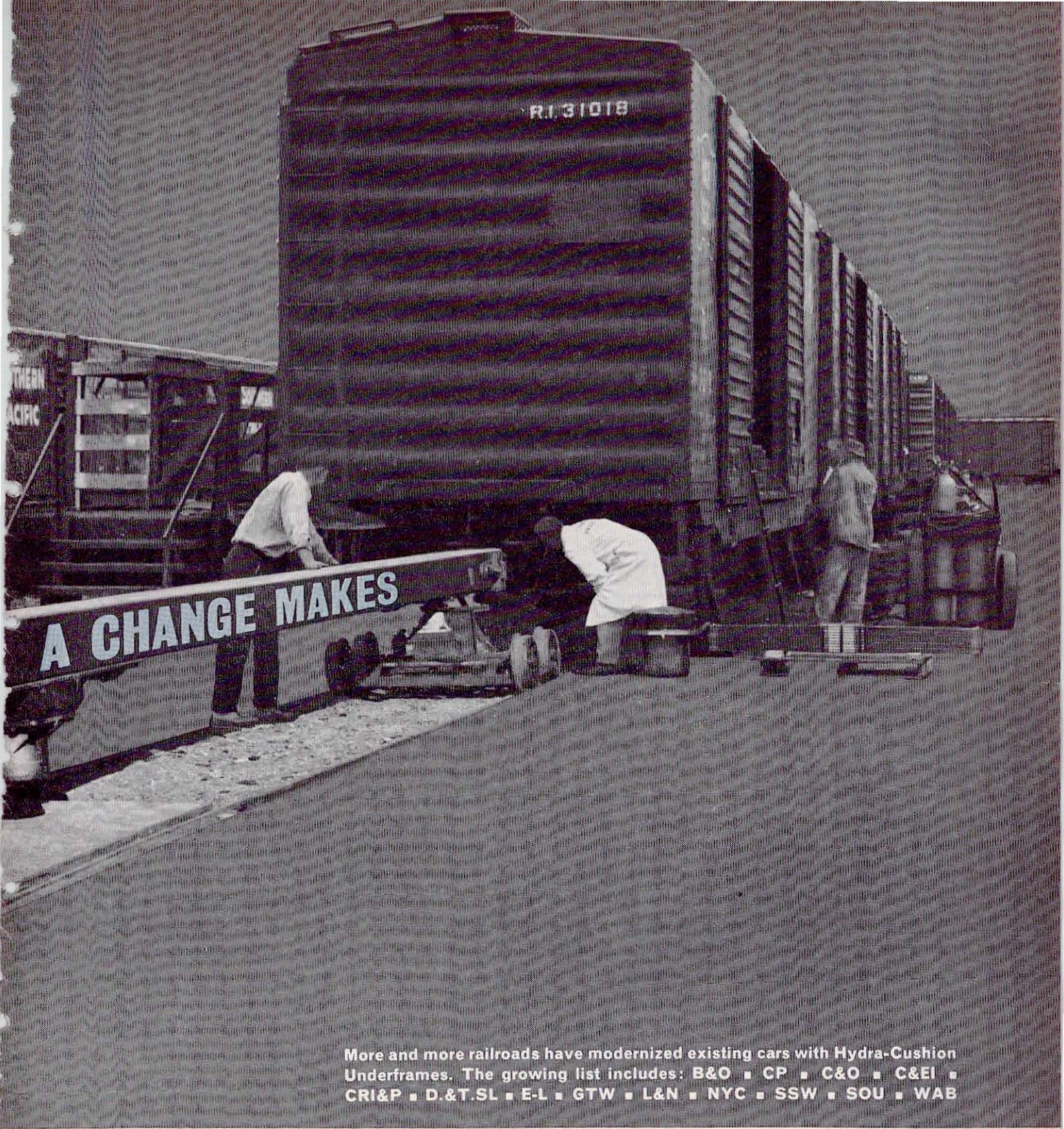
EVANS SIDEWALL FILLERS reduce car width in numerous stages to prevent side movement of packaged or unitized lading. Permanently installed, each filler stores against car wall when not in use.



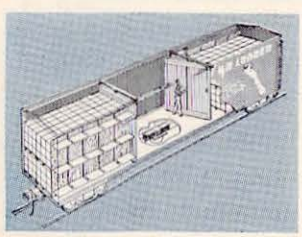
EVANS DF LOADER is a special cross-member device which locks high density or irregular lading for dunnage free, damage-free transit . . . America's most popular form of freight bracing.



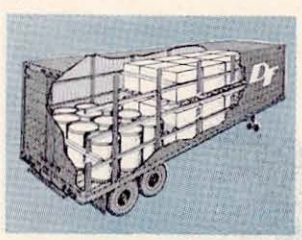
EVANS DFC COIL CAR, the first car especially designed from the rails up to safely transport coil steel, protecting it from in-transit damage as well as from the weather.



More and more railroads have modernized existing cars with Hydra-Cushion Underframes. The growing list includes: B&O ▪ CP ▪ C&O ▪ C&EI ▪ CRI&P ▪ D.&T.SL ▪ E-L ▪ GTW ▪ L&N ▪ NYC ▪ SSW ▪ SOU ▪ WAB



EVANS EELX cars (rolling laboratory, fact-finding test cars) contain DF-B Bulkheads, Adjustable Side Fillers, and the Hydra-Cushion Underframe. This equipment protects both car and lading.



EVANS TRUCK DF equipment permits full use of vehicle's capacity . . . often doubling the payload and reducing in-transit damage. It is used in many of America's leading fleets.

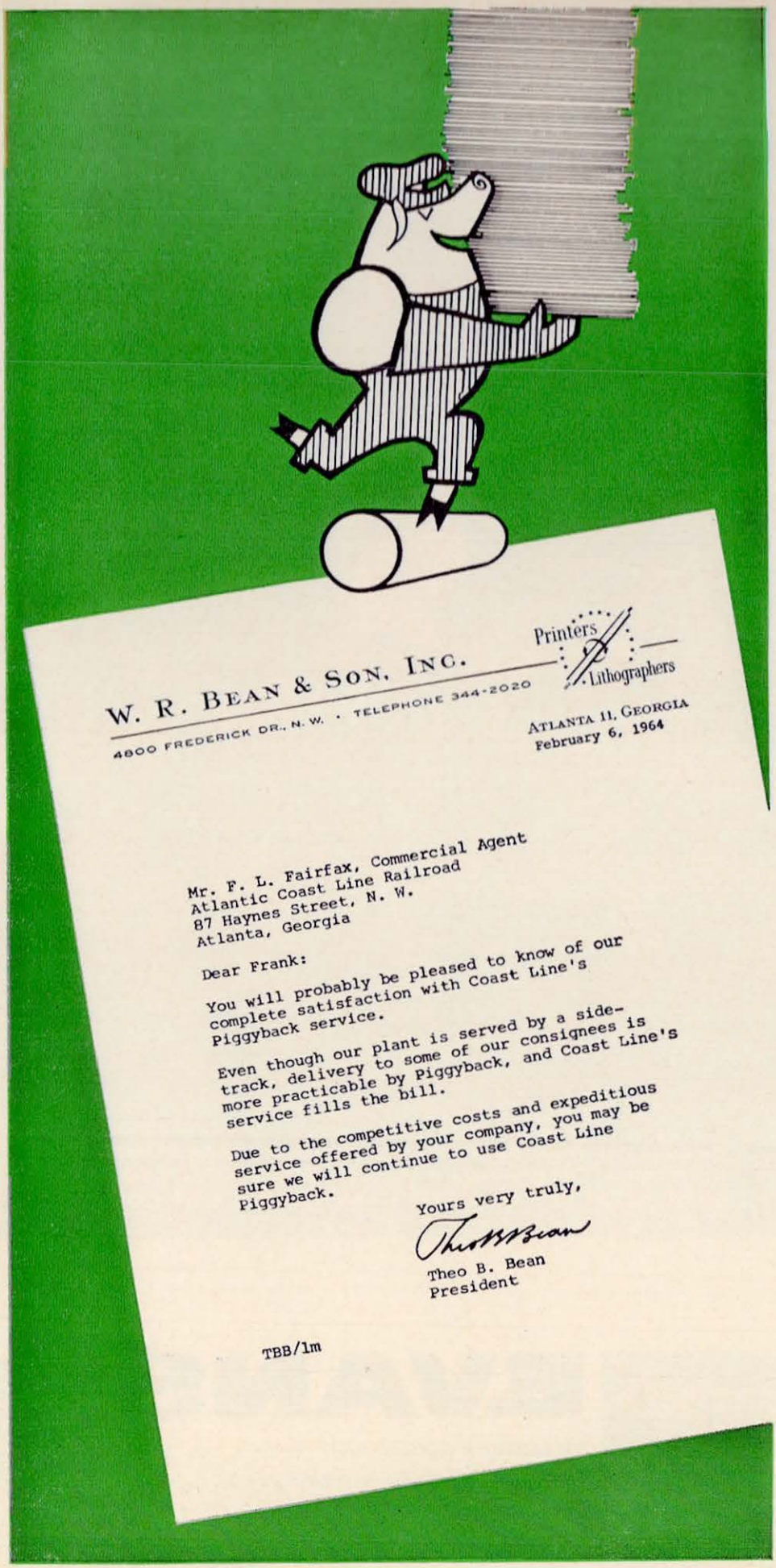
EVANS

TRANSPORTATION EQUIPMENT DIVISION

Plymouth, Michigan; Canadian Rep., International Equip. Co., Montreal

EVANS PRODUCTS COMPANY PLYMOUTH MICHIGAN

The "Kid Glove Treatment"!®


W. R. BEAN & SON, INC.
Printers
Lithographers
4800 FREDERICK DR., N. W. • TELEPHONE 344-2020
ATLANTA 11, GEORGIA
February 6, 1964
Mr. F. L. Fairfax, Commercial Agent
Atlantic Coast Line Railroad
87 Haynes Street, N. W.
Atlanta, Georgia
Dear Frank:
You will probably be pleased to know of our complete satisfaction with Coast Line's Piggyback service.
Even though our plant is served by a side-track, delivery to some of our consignees is more practicable by Piggyback, and Coast Line's service fills the bill.
Due to the competitive costs and expeditious service offered by your company, you may be sure we will continue to use Coast Line Piggyback.
Yours very truly,
Theo B. Bean
President
TBB/lm

Coast Line Helps Keep the Presses Rolling

A printer's life is one deadline after another. Meeting them with a top-quality product is the business of W. R. Bean & Son of Atlanta. And this is where Coast Line Piggyback service comes in. As you'll note in Mr. Bean's letter, for a substantial number of his customers Piggybacking is the "more practicable" way to assure expeditious delivery at reasonable costs.

How about your consignments? Perhaps Piggybacking on Coast Line is the more practicable way for you to ship, too. Find out. An inquiry will cost you nothing, and you might well save a lot. Just call your Coast Line man or write:

P. G. Back
Trailer Train Service
Atlantic Coast Line Railroad
Jacksonville, Florida

"Thanks for Using Coast Line Piggyback Service"

ATLANTIC COAST LINE RAILROAD

...serving the Southeast Coastal 6

MARKET OUTLOOK

Carloadings rise

Loadings of revenue freight in the week ended May 16 totaled 591,436 cars, the Association of American Railroads announced on May 21. This was an increase of 9,710 cars, or 1.7%, compared with the previous week; a decrease of 9,626 cars, or 1.6%, compared with the corresponding week last year; and an increase of 4,490 cars, or 0.8%, compared with the equivalent 1962 week. Ton-miles generated by carloadings in the week ended May 16 are estimated at 13 billion, an increase of 1.8% over the corresponding week of 1963, and 9.6% above the 1962 week.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, May 16

District	1964	1963	1962
Eastern	84,508	83,955	83,574
Allegheny	106,465	106,309	94,297
Pocahontas	56,156	57,069	52,081
Southern	114,184	113,836	116,006
Northwestern	82,369	85,253	85,431
Central Western	111,025	114,961	115,539
Southwestern	36,729	39,679	40,018
Total Western Districts	230,123	239,893	240,988
Total All Roads	591,436	601,062	586,946
Commodities:			
Grain and grain products	41,230	50,831	48,604
Livestock	2,247	2,836	3,664
Coal	110,931	112,023	103,972
Coke	9,158	8,740	6,794
Forest Products	38,863	37,058	39,884
Ore	57,368	50,353	50,123
Merchandise l.c.l.	12,908	17,481	23,379
Miscellaneous	318,731	321,740	310,526
May 16	591,436	601,062	586,946
May 9	581,726	598,876	583,947
May 2	567,743	591,210	587,413
Apr. 25	571,971	577,024	577,865
Apr. 18	581,127	561,261	569,493
Cumulative total, 20 weeks	10,737,523	10,630,647	10,910,266
Estimated Revenue Ton-Miles (millions) 20 weeks	241,700	230,400	225,200

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended May 9 totaled 17,252 cars, compared with 15,432 for the corresponding 1963 week. Loadings for 1964 up to May 9 totaled 306,863 cars, compared with 280,541 for the corresponding period of 1963.

IN CANADA.—Carloadings for the nine-day period ended April 30 totaled 103,827 cars, compared with 73,879 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenues Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
April 30, 1964	103,827	29,937
April 30, 1963	97,474	29,865
Cumulative Totals		
April 30, 1964	1,201,584	432,819
April 30, 1963	1,046,289	387,566

FREIGHT-TRAIN CARS

► *Baltimore & Ohio.*—Ordered 96 70-ton 10,000-cu-ft-capacity hi-cube box cars from Pullman-Standard. The cars will be equipped with cushion underframes and roller bearings, and will be used in auto parts traffic.

► *Chesapeake & Ohio.*—Ordered 200 100-ton, 4,600-cu-ft-capacity covered hopper cars from ACF at a cost of approximately $3 million. Delivery is scheduled to begin in December.

► *Norfolk & Western.*—Awarded a contract for 50 60-ft, 90-ton flat cars (RA, Mar. 9, p. 39) to Thrall Car, at a cost of approximately $900,000. Delivery is scheduled for fourth quarter.

PASSENGER-TRAIN CARS

► *St. Louis Car Division of General Steel Industries.*—Awarded Westinghouse Electric a contract to supply electrical equipment for 162 rapid transit cars for the Port Authority Trans-Hudson Corp (RA, Jan. 27, p. 47). Included will be propulsion motors, drives and control, and static auxiliary power supplies. Delivery will begin late this year and continue through mid-1965.

LOCOMOTIVES

► *Gulf, Mobile & Ohio.*—Directors authorized acquisition of 12 additional diesel-electric units. Builder has not been announced.

NEW FACILITIES

► *Canadian National.*—Awarded the contract for the last of the 41 bridges on the Great Slave Lake Railway to Dominion Bridge. The contract calls for construction of two 190-ft through truss spans across the west channel of the Hay River.

► *Chesapeake & Ohio.*—Is building at Russell, Ky. a $1.4 million rail welding plant for production of quarter-mile lengths of new or relay rail. The plant will make up to 150 welds every eight hours. Scheduled for 1964 is the laying of 113 miles of new rail on C&O main lines.

► *Louisville & Nashville.*—Will build an additional piggyback terminal in Louisville, at a cost of $100,000. The facility will be equipped with two parallel, double-connected tracks, and be able to accommodate 20 of the road's flat cars. Portable ramps, access roadways and a trailer-parking area will also be provided.

► *New Haven.*—Is installing 10 miles of 624-ft 140-pound welded rail on the eastbound express track of the main line between New Rochelle, N.Y. and Greenwich, Conn. In 1963, the NH resumed a welded rail modernization program, halted since 1959, by laying down new rail on four miles of main line track and nine miles of branch line.

► *Toledo, Peoria & Western.*—Company forces are relaying 13.1 miles of 131-pound welded rail on the Eastern Division at an estimated cost of $504,000.

CAPITAL EXPENDITURES

► *Wabash.*—Announced a 1964 capital-spending program of $17.5 million, highest since 1957. Acquisitions will include 200 box cars (100 60-ft units and 100 86½-ft cars); 101 covered hopper cars; and 15 2,500-hp diesel-electric locomotives.

YOU OUGHT TO KNOW

Big John rates upheld: Southern's 60% reduction in grain rates for multiple car shipments in Big John hopper cars has been upheld by the Federal District Court in Cincinnati. The court enjoined enforcement of an ICC order which would cut back the reduction to 53.5%. Southern President D. W. Brosnan's comment included the statement: "It is ridiculous that any carrier would have to fight in the courts in order to save money for people and to help our economy grow."

Soo moves to drop a train: One of the West's one-time well-known "name" trains—the Soo Line "Laker"—will be dropped from Soo's timetables. In announcing the move, Soo summed it all up in one sentence with a grim air of finality: "The 'Laker,' a passenger train between Chicago and Superior, Wis., which few people use, which isn't needed for mail and express traffic and which in the next year will lose the Soo a half-million dollars, will be discontinued in mid-June."

Evans plant expanding: A $1.5 million expansion of its manufacturing facilities at Plymouth, Mich., is being undertaken by Evans Products Co. The enlarged plant will make DF-C coil cars and other specialty railway cars utilizing Evans devices.

Sparton sells division: Sparton Corp., a railway supplier since 1957, has sold its railway equipment division to Transportation Specialties Division of Transco, Inc. Sparton's major railway product line has been the Sparton Easy Loader System (SEL). Transco, a railway supplier since 1936, markets the Safe Loader (SL) and other loading systems.

The high 'side' cost of a strike: In all the figuring of losses which would be suffered in a nationwide rail strike, one statistic was generally overlooked—the cost to the industry of unemployment benefits, payable to strikers and others idled by such a walkout. Now Thomas M. Healy, management member of the Railroad Retirement Board, has the figure—and it's a staggering one: $6 million per day. Mr. Healy also did some addition with the FEC and IC strikes. Since January 1963, he noted, more than $4 million has been paid out in benefits in the Florida walkout. And the IC strike, short though it was, cost about $350,000.

Four roads and a unit train: A new unit-train coal movement—billed as the first one to involve four railroads—got under way May 20-21, with delivery of a 7,000-ton shipment from a southern Indiana mine to a Northern Indiana Public Service Co. generating station at Baileytown, Ind., near Michigan City and Gary. Participating roads are the Algers, Winslow & Western, Southern, Chicago & Eastern Illinois and Chicago South Shore & South Bend. The unit train is scheduled to make three round trips every two weeks from mines on AW&W and Southern. Annual volume initially will be 400,000 tons, minimum 6,000 tons per movement. Eventually, volume may climb to 1 million tons annually, minimum 9,000 tons per move.

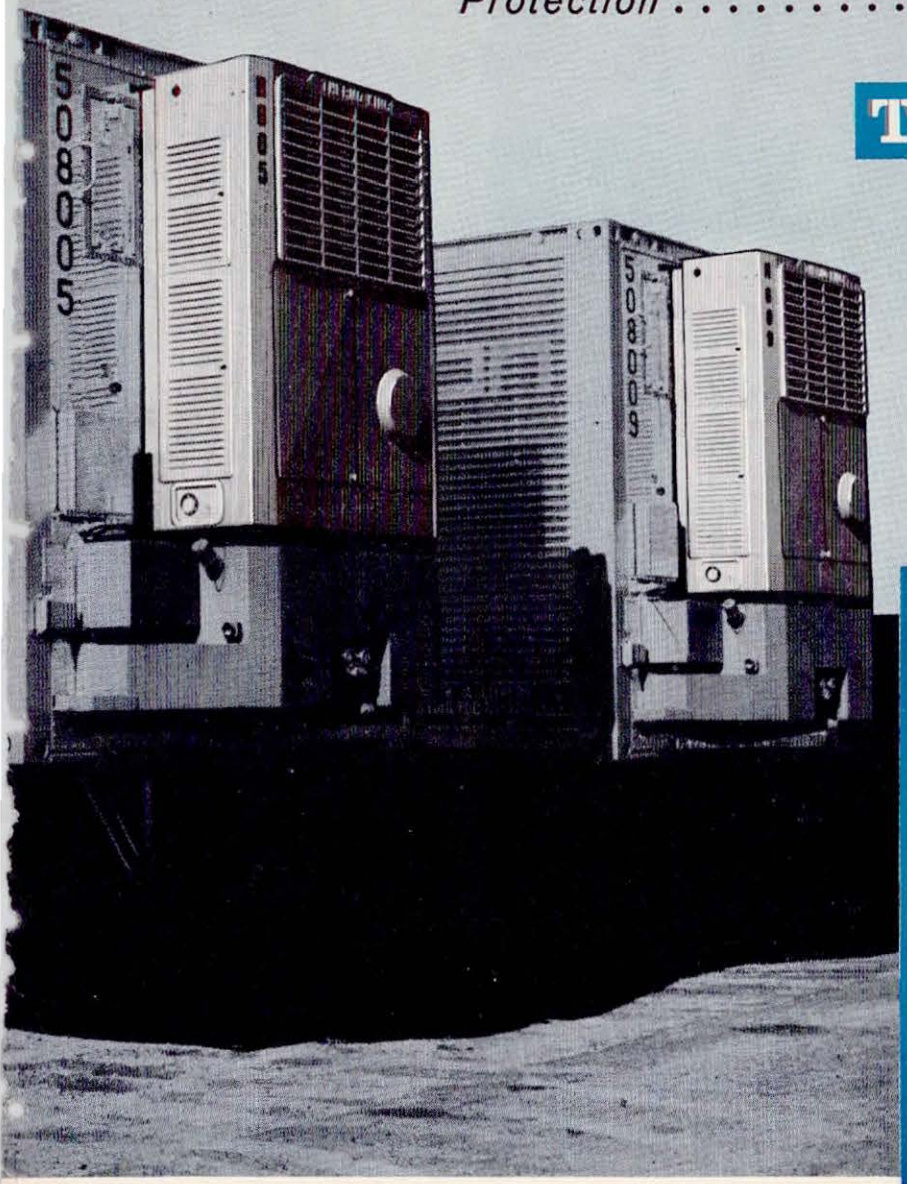
Seatrain cuts service: Seatrain Lines, which operated at a deficit of $1.7 million in 1963, moved last week to stem the flow of red ink. Seatrain said it would discontinue (effective June 17) service from Edgewater, N. J., to New Orleans. This service accounted for $745,000 of its '63 loss. Seatrain President John L. Weller was quoted as asserting that the ICC permits rail rates that "discriminate" against the coastwise carrier.

Supplier honored: The Government of France has awarded the decoration of Chevalier de l'Ordre de l'Economie Nationale (Knight of the Order of the National Economy) to a U.S. transportation supplier—Strick Trailers President Sol Katz. Jean-Claude Pettit, commercial counselor at the Embassy of France, presented the award at a ceremony in New York City. He called Mr. Katz "a sincere friend of our country, and on the economic side, a partner to whom we owe the exchange of products and techniques particularly beneficial for the two economies."

Current statistics

Net income, estimated	
3 mos., 1964	$144,000,000
3 mos., 1963	84,000,000
Carloadings, revenue freight	
20 wks., 1964	10,737,523
20 wks., 1963	10,630,647
Freight cars on order	
Apr. 1, 1964	36,919
Apr. 1, 1963	20,970
Freight cars delivered	
3 mos., 1964	17,300
3 mos., 1963	9,545
Serviceable cars	
Apr. 1, 1964	1,409,862
Apr. 1, 1963	1,414,166

Symbol of RELIABILITY in Transport Perishable Protection . . . . . .



★★★

THIS UNIT IS

THERMORATED*

* **VERIFIED PERFORMANCE**
  RATED CAPACITY WITH ASSURED RELIABILITY
* **JOB ENGINEERED**
  DEVELOPED FOR A SPECIFIC REQUIREMENT
* **TOTALLY "BUILT-FOR-TRANSPORT"**
  CUSTOM COMPONENTS WITH RUGGED DURABILITY
* **SERVICE/PARTS PROTECTION**
  FACTORY-AUTHORIZED DEALERSHIPS EVERYWHERE

*EXCLUSIVE WITH THERMO KING

America's leading railroads protect perishable *Piggyback* cargoes with dependable THERMO KING UNITS

Alaska Railroad	Missouri-Kansas-Texas
Atlantic Coast Line	Missouri Pacific
Baltimore & Ohio	New York Central
Boston & Maine	Nickel Plate
Burlington	Northern Pacific
Chicago & Northwestern	Pacific Fruit Express
Erie Lackawanna	Pennsylvania
Frisco	Santa Fe
Fruit Growers Express	Seaboard Air Line
Great Northern	Southern
Illinois Central	Southern Pacific
Kansas City Southern	Union Pacific
Louisville & Nashville	United States Freight
Milwaukee Road	Western Pacific

Canadian Pacific

THERMO KING introduced the first mechanical transport refrigeration unit in 1938, and since then has been the unchallenged leader in this field. For over a quarter century, creative Thermo King engineers have kept pace with demands for specialized transport temperature control applications, developing new units with increasingly greater capacity and efficiency of operation.

Today, thousands of reliable THERMO KING units are protecting the perishable piggyback cargoes of railroads in every section of the country.

The continued dependable operation of these units is assured by Thermo King's exclusive nationwide service organization and its staff of factory engineers. Factory-authorized service and parts are available at nearly 200 service stations in North America. Factory engineers are readily available everywhere to solve special problems.

THERMO KING, in addition to supplying a wide choice of standard piggyback trailer units, offers the services of its highly specialized engineering talent for the development of custom-built equipment for other railroad refrigeration and heating requirements.

***THERMORATED is the sum of 4 EXCLUSIVE ADVANTAGES . . . 4 big reasons why THERMO KING is your best choice if you want proven dependability and maximum efficiency in transport refrigeration.**

Write for brochure on "Piggyback" Perishable Protection

World Leader in Transport Refrigeration

THERMO KING *Corporation*

350-E W. 90th Street, Minneapolis, Minn. 55420

Theodore J. Klauenberg
B&O

C. Russell Riley
B&O

Harvard R. Osmond
C&EI

William H. Peake
C&EI

PEOPLE IN THE NEWS

BALTIMORE & OHIO.—Theodor J. Klauenberg, assistant to chief operating officer, Baltimore, Md., appointed assistant chief operating officer. **C. Russell Riley,** special assistant to chief operating officer, named assistant to chief operating officer, responsible for train scheduling, classifications and car service.

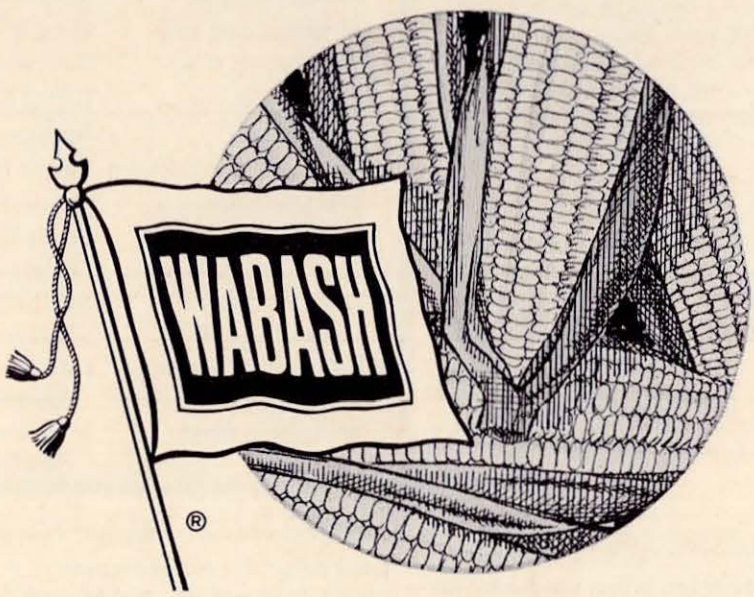
CANADIAN NATIONAL-GRAND TRUNK WESTERN.—Walter J. Gohr, general rates officer, Chicago, appointed assistant regional manager-rates there. **William T. MacCallum,** traffic analyst, named administrative assistant, rates, tariffs and divisions, with headquarters remaining at Chicago.

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—K. T. Reed, general manager motive power and equipment, Baltimore, appointed general manager—operational planning. Mr. Reed will coordinate all planning in the areas of transportation, engineering and equipment and will also continue in immediate charge of C&O-B&O mechanical planning. Industrial engineering, under **W. J. Dixon** as general manager, will be performed within the operational planning department as a joint C&O-B&O function.

CHICAGO & EASTERN ILLINOIS.—Harvard R. Osmond appointed executive vice president. In addition to handling the normal duties of executive vice president, Mr. Osmond will supervise piggyback operations, excepting train operations. **William H. Peake,** assistant vice president—traffic, succeeds Mr. Osmond as vice president—traffic.

When it's sold in Mid-Market, U.S.A., it's shipped by Wabash Cannonball Freight Service.

WABASH RAILROAD COMPANY



James B. Stock, coal freight agent, named assistant manager, motor service (sales).

Supply Trade

William T. Ylvisaker and **John E. Angst,** directors and vice presidents, **General American Transportation Corp.,** have been named group vice presidents.

David L. Haines, formerly general manager, rocket motor plant, **B. F. Goodrich Co.,** Rialto, Calif., has been named manager of Goodrich's new Granu-Flow systems department at Akron, Ohio (See New Products Report, p. 98). The department will handle the complete design, engineering and installation of Granu-Flow systems for pneumatic transporting and conveying of dry materials.

Robert F. Goodwin has been appointed president of **Buck Equipment Corp.,** wholly owned subsidiary of Royal Industries, Inc., Pasadena, Calif., succeeding **Steward T. Buck.**

Fred Muller, Jr., has joined **Integrated Container Service, Inc.,** as vice president.

Sparton Corp. has announced the sale of its railway equipment division in Detroit, Mich., to **Transportation Specialties Division** of **Transco, Inc.,** Chicago. Space formerly occupied by railway operations in Detroit will be utilized by Sparton's Allied Steel & Conveyors Division to expand its operations in conveyor systems and specialized automation equipment. Railway employees will be transferred to this operation.

Industrial Traffic

Robert H. Foltz has joined **FMC Corp.** as director of traffic, Chemical Divisions, New York. **E. G. Harrison** continues as manager of transportation.

Clarence S. Simpson, traffic manager, **E. I. du Pont de Nemours & Co.,** Wilmington, Del., will retire June 30.

William A. Lesansky has been named comptroller, **Defense Traffic Management Service,** Washington, D. C. He formerly served as deputy director of services and acting comptroller.

International Salt Co. has created a distribution division at Clarks Summit, Pa. The new division was formerly a department under the late **Myron L. Hyman,** vice president. **Frank Catanzarite,** distribution manager, has been named director of distribution. **Darrell H. Smith** remains general traffic manager in charge of the traffic department within the new division.

Randall Meyer named manager, Transportation Department, **Humble Oil & Refining Co.,** succeeding **Fred D. Dennstedt,** transferred to Standard Oil Co. (New Jersey), Humble's parent firm, as deputy coordinator of worldwide refining activities. **Roy A. Baze,** coordinator of producing investments, succeeds Mr. Meyer as manager of products supply and distribution for Humble.

OBITUARY

James B. Donnelly, 81, retired comptroller, **Soo Line,** died May 9 at San Angelo, Tex.

Horace N. Woodbury. 75, who retired in 1955 as comptroller, **Maine Central,** died April 30 in Portland, Me.

CLASSIFIED ADVERTISEMENTS

TRANSIT ENGINEER

City of Philadelphia

. . . offers excellent opportunity as Assistant to the Senior Transit Engineer.

Duties include the design and purchase of new rolling stock, supervision of leasing multi-million dollar facilities, and planning a program to meet growing future needs.

Requires a degree in Civil, Mechanical, Electrical or Industrial Engineering plus 4 years' engineering experience evaluating public transportation systems and analyzing present and future needs, or applying engineering principles to the solution of public transportation equipment and operational problems.

Excellent Fringe Benefits
SALARY $10,104–$11,030

Send Resume to:
Mr. Pat Forristal
Personnel Officer
1223 City Hall Annex
Philadelphia, Pa. 19107

Faster From Foster

Nation's Largest Warehouse Stocks

RAIL AND TRACK MATERIAL

PIPE, VALVES, FITTINGS

L. B. FOSTER CO.

Pittsburgh 30 • New York 7 • Chicago 1
Houston 2 • Los Angeles 5 • Atlanta 8
Cleveland 35 • San Francisco 11

WANTED

50 to 100 used 50- to 70-ton self-clearing steel hopper cars suitable for quarry to water terminal road switcher operation of 20-mile turn-around.

Box 56, RAILWAY AGE
22 West Madison Street
Chicago, Illinois 60602

PUBLIC & PRESS RELATIONS

Editor-writer with intimate knowledge of railroads and railroad men, the railroad supply field and national and local news media desires Chicago area connection. Currently employed on trade publication. Background includes 10 years experience with operating and public relations departments of a major railroad, five years media experience. Available for interview. Box #114, 30 Church St., New York, N.Y. 10007.

Project Engineer/Program Manager

Desires work with railroad or railroad equipment supplier. Age 31. Degree: BS in Physics with Mech. Eng. Background. Last 5 yrs. exper. in missile industry. Willing to travel. Resume, references & salary on request. Reply to:

Box No. 115, RAILWAY AGE
30 Church Street
New York, N.Y. 10007

EUROPEAN INFORMATION

Off-duty reading for railroad men —"European Railways" magazine Quarterly, illustrated, interesting —includes features on East & West Europe. Only $2.50 a year. $4.50 two years or send $1 for 3 sample copies. (Pay by check or Int. Money Order). European Railways, Evelyn Way, Cobham, Surrey, England.

POSITION AVAILABLE

Associate editor to fill vacancy on staff of Railway Signaling and Communications. Work to consist of writing descriptive articles, and do other editorial work in connection with producing a monthly magazine. Desire young man, under 35 years of age, with electrical engineering education and at least two years' experience in signal work. Send application with statement of education and experience to Editor, Railway Signaling and Communications, 30 Church St., New York, N.Y., 10007

Engineer

With Signal and Communications experience. Administrative and supervisory aptitudes. Between age 30 and 45. Salary based on qualifications. Excellent fringe benefits. Headquarters—Richmond, Virginia. Apply giving personal resume addressed to:

C. E. Mervine, Jr., Director of Personnel

R. F. & P. RAILROAD COMPANY

Broad Street Station, Richmond, Va., 23220

SECOND HAND CAR REPAIR PARTS

Conforming to AAR Specifications

All types of freight cars rebuilt, or cars suitable for interplant use as is.

Car Leasing—Relaying Rails

J. Robert Whalen, Car Parts Manager
Arnold J. Karol, Vice President

MARFAX STEEL AND RAILWAY EQUIPMENT CO.

139th Street and South Western Avenue, Blue Island, Illinois
P. O. Box 236 Phone: 312-264-1420

Advertisers' Index

Alco Products, Inc. 32-33
Aluminum Company of America 4, 42
American Oil Company 36,37
American Steel Foundries, Inc. 16
Atchison, Topeka & Santa Fe Railway System 34
Atlantic Coast Line Railroad 102

Bartlett Trailer Corporation 89
Berwick Forge & Fabricating Company 93
Bruce Company, Inc., E. L. 29
Buck Equipment Company 88
Buffalo Brake Beam Company ..... IBC

Cardwell-Westinghouse Company 95
Clevite Corporation, Cleveland Graphite Bronze Division 39

Dayton Steel Foundry Company 66
Dow Metal Products Company, Division of Dow Chemical Company 80-81

Eberhard Manufacturing Company ..... IFC
Evans Products Company 100-101

Freightmaster, A Division of Halliburton Company 35
Fruehauf Trailer Division, Fruehauf Company 64-65

General American Transportation Corporation 60-61
General Electric Company 68-69
Great Dane Trailers, Inc. 56-57

Humble Oil & Refining Company 31
Hyatt Bearings Division, General Motors Corporation 26-27
Hydra-Cushion, Division of Evans Products Company ..24-25

Kaiser Aluminum & Chemical Corporation 87

Landreth Industries, Inc. 17-22
Lord Manufacturing Company 62
Louisville & Nashville Railroad 96

Manganese Steel Forge Company 86
Midland Reclamation Company 94
Miner, Inc., W. H. 6
Motorola Communications & Electronics, Inc. 10

National Castings Company ..... BC
New York Air Brake Company 23
Norfolk & Western Railway 70

Pine Trailers 92
Pittsburgh Plate Glass Company 3
Pullman-Standard, Division of Pullman, Inc. 40-41

Reading Railroad 38
Reynolds Metals Company 58-59

St. Louis Screw & Bolt Company 92
Scullin Steel Company 83
Seaboard Air Line Railroad 30
Southern Pacific Company 28
Southern Railway System 76-77
Standard Car Truck Company 91

Thermo King Corporation 105
Trailco Manufacturing & Sales Company 90
Trailer Train Company 84-85
Trailmobile Division, Pullman, Inc. 74-75
Transicold Corporation 9

Wabash Railroad Company 106
Western Pacific Railroad 13
Westinghouse Air Brake Division, Westinghouse Air Brake Company 14-15
Wine Railway Appliance Company 79

Advertising Sales Department

New York, N. Y. 10007,
30 Church St., WOrth 4-3060
Duane C. Salisbury—executive vice president; director of sales
J. S. Vreeland—vice president; sales manager
W. A. Cubbage—district manager
Elliot A. Barrows—district manager

Chicago, Ill. 60602,
22 W. Madison St., RAndolph 6-0794
J. R. Thompson—vice president;
K. F. Sheeran—regional vice president;
Walt W. Hutchinson—district manager

Cleveland, Ohio 44115,
1501 Euclid Ave., MAin 1-4455
H. H. Melville—vice president;
C. J. Fisher—district manager

Pittsburgh, Pa. 15219, Suite 203,
Carlton House
GRant 1-8186
C. J. Fisher—regional vice president

Atlanta, Ga. 30309,
22 Eighth St., N. E.,
TRinity 2-6720—J. S. Crane

Dallas, Tex. 75219,
3915 Lemmon Ave., LAkeside 1-2322
Joseph Sanders

Los Angeles, Cal. 90017,
1336 Wilshire Blvd.
HUbbard 3-8414
Fred Klaner, Jr.

San Francisco, Cal. 94111,
916 Kearny St.
GArfield 1-7004
Lewis Vogler & Co.

London S. W. 1, England
TRAfalgar 6318
67/68 Jermyn St., St. James's
Max F. Holsinger, Ian Goulden; A. T. Chapman-Purchas; John Thornton

Paris, 16e., France
46 Boulevard Exelmans
Michel Lemaire

Dusseldorf, Germany
Huttenstrasse 17
Max F. Holsinger; Dr. D. Heimann; E. Hillerbrand; Herbert Haibt

Tokyo, Japan
Sun Gain Shia, Ltd.
Shiba Nikkats Bldg.
13, Shiba Park
Minato-Ku
C. H. Yiu, Managing Director
Telephone: 501-8927

TOFC versus box cars

TOFC has a low net-to-tare ratio but its rate simplicity and speedier turn-around sometimes give it an economic advantage.

Since the inception of Plan III piggyback service, there have been railroad men who have contended that: "These rates are diverting more traffic from box cars than from trucks."

Checking the truth of these assertions is not always easy. It is not difficult, here and there, to find cases where Plan III rates have taken tonnage out of box cars—but it certainly is just as easy (probably more so) to cite instances where the Plan III tonnage was diverted from the highway. Anyhow, railroads are in business to produce net earnings—not merely gross revenues.

Even if a substantial share of Plan III tonnage should come from box cars, that fact alone would not necessarily be anything to worry about, unless it could be shown that net earnings under Plan III were less than those of box car movement. And even lower net earnings under Plan III would not prove the unwisdom of the Plan III rates—if it could be shown that the box car rates were uncompetitively high, and that the traffic was in immediate danger of diversion to the highway anyhow.

Service by piggyback Plan III and by box car are quite different—in the extent and nature of the work performed by the railroad, and the costs incurred. In the case of piggyback, the shipper "furnishes the box." Not only that, but he assumes the expense of movement in terminals. Where traffic is moved in a box car, the railroad may be incurring the tremendous expense of picking up a single car at an industrial siding with a 5-man switching crew; and duplicating this costly operation at the delivering terminal. If a piggyback rate diverts this kind of box car traffic to TOFC movement, the effect on railroad net revenues may be favorable, even though the reduction in gross revenue may be substantial.

Plan III was offered originally, of course, to attract forwarder traffic and, as such, it had elaborate provisions for commodity mixtures. These have gradually been simplified and, in some cases, eliminated entirely. There are some informed railroaders who would like to do away with the mixture rules altogether—and certainly the trend seems to be in that direction. The controlling force in rate-making these days is the cost of private transportation; and the private trucker recognizes no difference between commodities except their comparative handling costs.

If a private hauler is going to move a trailer 1,000 miles by highway, he doesn't care whether the load comprises one commodity or a dozen. And if the railroad wants to get that particular trailer off the highway and onto piggyback, it cannot afford to be persnickety about the number of commodity classifications that make up the trailer's lading.

Competitive economics seems to be directing the pricing of Plan III piggyback—i.e., to the extent that these economic forces are being adequately calculated and recognized. This is an achievement which has probably not yet reached perfection on most railroads. But how about the pricing of box car service? May it not be that this is the real seat of the difficulty—if it is true that there is some competition between Plan III and box cars that is not entirely desirable? Have the comparative costs of box car and TOFC transportation been adequately examined?

A box car, if it moves from industrial siding to industrial siding, can be a highly economic method of moving freight. But its economic attractiveness is sharply diminished if cars have to be handled singly in industrial switching. Costs are likewise increased if routes used involve many interchanges. Box cars incur unnecessarily high costs, too, because of the high ratio of time that they usually spend standing around—a wasteful situation that piggyback service largely overcomes. TOFC's net-to-tare ratio is far less than that of a well-loaded box car, but TOFC overcomes much of this disadvantage by its higher ratio of movement to idle time.

Complicating the pricing job

The box car's main handicap in competing with TOFC, however, would appear to be its connection with traditional rate-making. It is in the box car (and other standard car) rates where charges often have to be made at A in relation to those at B, despite considerable differences in transportation conditions—this in order to preserve traditional market and commodity relationships. Private haulers pay no attention to these traditional relationships, but railroads are frequently called upon (especially in standard-car service) to do their best to protect their patrons from the rigors of competition (even though railroads themselves enjoy no such protection).

Competition between TOFC and standard cars will be healthy and productive of improved service and maximum net earnings—when and if each service is performed at its economic best, and is rated accordingly.

The large and well-loaded standard car, particularly if handled promptly in multiples, is a highly efficient transportation tool that should excel in quantity movements even as TOFC can often excel with smaller quantities. The competition that confronts both of them is the unregulated private hauler.

Today's

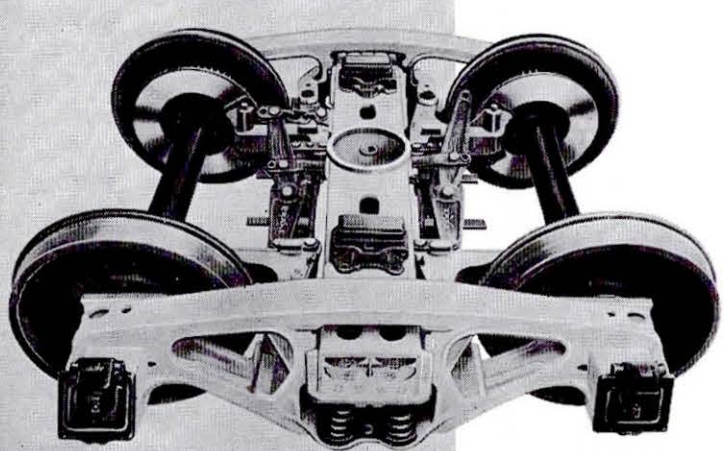
IMAGINATIVE railroading is built on NEW IDEAS!

BUFFALO'S BRAKE-X

offers you an outstanding concept in packaged freight car braking

Buffalo's BRAKE-X Fits Ideally Into These Programs:

- Special Purpose Cars
- High Capacity Cars
- Piggyback Cars
- Damage Prevention
- Reduced Maintenance



BUFFALO BRAKE BEAM COMPANY

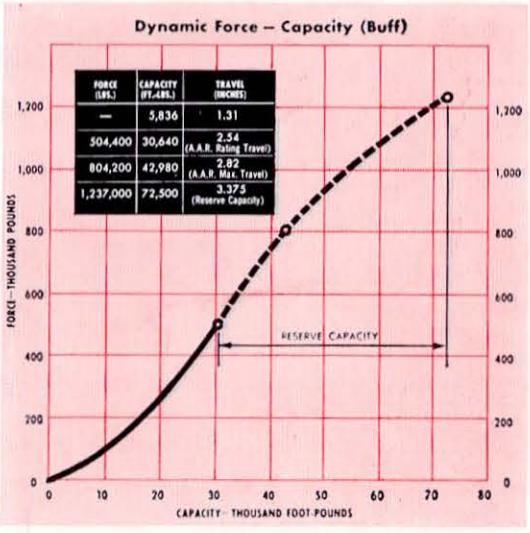
140 Cedar Street, New York 6, N.Y.

Plants at: Buffalo, N. Y. and Hamilton, Ont., Canada

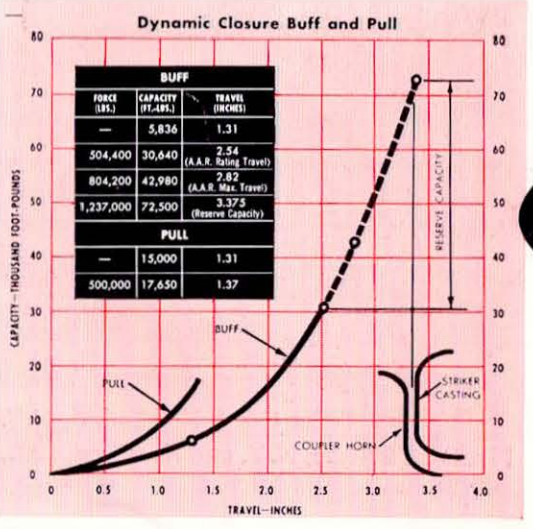
Best-known member of National's family of EA cushioning devices*

**Energy Absorbing*

NATIONAL MF-400A RUBBER DRAFT GEAR



FORCE (LBS.)	CAPACITY (FT.-LBS.)	TRAVEL (INCHES)
—	5,836	1.31
504,400	30,640	2.54 (A.A.R. Rating Travel)
804,200	42,980	2.82 (A.A.R. Max. Travel)
1,237,000	72,500	3.375 (Reserve Capacity)



BUFF		
FORCE (LBS.)	CAPACITY (FT.-LBS.)	TRAVEL (INCHES)
—	5,836	1.31
504,400	30,640	2.54 (A.A.R. Rating Travel)
804,200	42,980	2.82 (A.A.R. Max. Travel)
1,237,000	72,500	3.375 (Reserve Capacity)
PULL		
—	15,000	1.31
500,000	17,650	1.37

The One and Only Unconditionally Certified All-Rubber Draft Gear

The National MF-400A Rubber Draft Gear has received AAR Unconditional Certificate No. 39, having exceeded AAR Specifications M-901D-59. Official rated capacity is 30,640 foot-pounds at 504,000 pounds force and 2.54 inches travel.

Characteristic of all National rubber draft gears, the MF-400A cushions all the way . . . all the time . . . never goes solid. Because it cushions all the way, the MF-400A has a *maximum capacity* of 72,500 foot-pounds at 1,237,000 pounds force and 3.375 inches travel.

Everyone complains about impact damage. National is *doing* something about it. So are leading railroads. They're equipping with National MF-400A Gears — the only unconditionally certified all-rubber-cushioned draft gear.

moving ahead fast... to keep you competitive

NATIONAL CASTINGS COMPANY

Transportation Products Division • Cleveland, Ohio 44106
International Division • Cleveland, Ohio 44106
National Castings Company of Canada, Ltd.
66 Portland St., Toronto 2B, Ontario

GEARED TO PROGRESS P R I MEMBER

3C GLIDING SILL • COUPLERS AND ROTARY COUPLERS • TLC TIGHTLOCK COUPLERS • YOKES • DRAFT GEARS • FREIGHT TRUCKS • JOURNAL BOXES • ROLLER BEARING ADAPTERS • SPEEDLOADER CONTAINER HANDLING SYSTEM